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MAY, 1958

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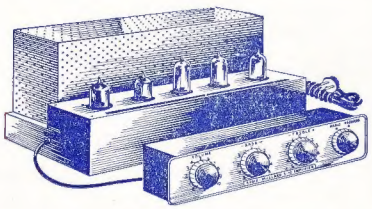

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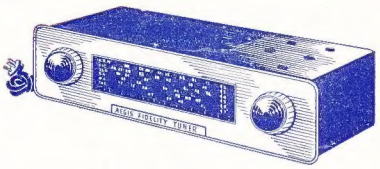

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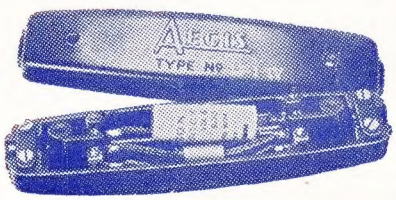

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VK3WI: Sundays, 1130 hours EST, simultaneously on 3573 and 7146 Kc., 57.5 and 146.25 Mc. Intrastate working frequency 7135 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK4WI: Sundays, 0900 hours EST, simultaneously on 3560 and 14342 Kc. W.I.A. Country Hook Sunday mornings 0900 hours. Please call VK4ZM on 20 mx, and VK4WI on 40 mx. Sunday night rebroadcast of the news on 80 mx at 2100 hours, conducted by VK4WI.

VK5WI: Sundays, 1000 hours SAST, on 7146 Kc. Frequency checks are given by VK5MD and VK5WI by arrangements on all bands to 56 Mc.

VK6WI: Sundays, 0930 hours WAST, on 7146 Kc. No frequency checks available.

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EDITORIAL

★

". . . to Elect a Committee and Appoint a Chairman"

The average Ham, long before he gets his licence, realises that Amateur Radio occupies narrow strips of territory sandwiched between covetous neighbours, and from an instinct for self-preservation, if for no other reason, he joins the W.I.A. Unity, he feels, is strength, and every one more member means **added** strength and added assurance of the quiet enjoyment of his hobby.

It is likely, however, that few Hams ever get to know every detail of the internal operation of the Institute. Overall policy, for instance, is determined by Federal Council. Federal Executive is its operational instrument and through Federal Executive it maintains contact with the Authorities and with Amateur bodies throughout the world.

Within this framework of course each Division has an independent organisation of member Hams. And within these Divisions are the Zones, carrying on in varying degrees of activity, functions of their own.

Besides this there is the Federal QSL Bureau, the Federal Contest Committee, the Civil Emergency Net, the Satellite Reporting Organisation and the Federal Traffic Net. There is a Committee for publishing your journal and the Australian Call Book. There are within the Divisions organisations for conducting the Sunday morning news broadcasts, producing Divisional newsletters, transmitting slow morse for learners, and producing fox hunts, transmitter hunts, scrambles, and social functions.

It is unlikely that any other field of spare-time activity so vitally stimulates the British impulse to elect a Committee into an extremely happy family, but simultaneously trains a large body of first-class technicians, whose value to their community cannot easily be calculated.

FEDERAL EXECUTIVE.

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Tests with Multiband Components and the VK2AOU Triband Beam

BY H. F. RUCKERT,* VK2AOU

LISTENING on the DX bands shows that the triband beam aerials are by far the most popular and very successfully used arrays. But it is also noticed that there is a lot of argument as to the actual function of these beams and several unanswered problems seem to remain after listening to an account from those who have not achieved the expected results with their home-made beam.

We will, therefore, describe simple tests everyone can copy with a calibrated grid dip oscillator (g.d.o.) and a few pieces of wire and cable. The tests show quite clearly the properties of the beam components and how the functions can be combined to achieve triband operation. These tests will also demonstrate how Amateurs can do developmental work with their limited facilities.

The second part of the paper brings the description of a triband beam the writer used with very satisfactory results during the previous year. Most of the tests can also be made indoors where it is far more convenient. It does not matter if we get a small error due to the increased capacity of the dipole to the walls, etc. We are also aware of the fact that **especially at** v.h.f. the diameter of the dipole conductor has some effect on the resonance frequency.

Despite all this, and the not-too-great accuracy of the g.d.o. calibration, the results will be clear enough to show the principles involved, and that is the main purpose of the experiments and this paper.

The wavelength, being measured in cm. or m., will therefore require use of the following system to describe the tests:

1 cm. = 0.3937 inch
1 m. = 39.37 inches
1 m. = 3.281 feet

DIPOLE RESONANCES

1st Test

A piece of wire 7 m. long is erected, insulated at both ends and at least three feet away from walls or other objects. In the middle we bend the wire to a small loop to facilitate the coupling of the g.d.o. coil to this dipole.

The resonance indicated by the g.d.o. will be near 19.5 Mc., 60 Mc. and 100 Mc., etc., if our g.d.o. goes high enough in frequency. This means that a dipole has, besides its fundamental resonance, a resonance at the third and fifth (etc.) higher odd harmonics. This is quite logical if we plot the current distribution along the dipole as this is shown in Fig. 1. We get in principle the same result if we use a shorter dipole which may have its fundamental at 50 Mc. We will now find the next higher resonance at 150 Mc.

*25 Berrille Road, Beverly Hills, N.S.W.

2nd Test

Several types of minibeams use inductive-loaded dipoles, for example an inductor in the middle. We now place in the middle of the 7 m. long dipole a coil with about 5 μH. (13 turns, 4.3 cm. diameter, 4.5 cm. length). The g.d.o. is now showing resonance near 14 Mc., 42 Mc. and 70 Mc., etc., again at odd higher harmonics.

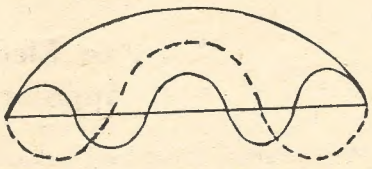


FIG 1 7m long dipole. Fund. 3rd, 5th harm. Res at: 19·5, 60, 100 mc etc.

If we repeat this test at v.h.f. we can use a 1.9 m. long dipole which has a resonance near 75 Mc., insert a small coil in the middle to get the fundamental resonance at 48 Mc. The next higher resonance will now again be at about 3 × 48 Mc. We see that a small loading inductance does not disturb the fundamental law: that a dipole has only odd harmonics.

STUB RESONANCES

3rd Test

Less well known is the fact that a stub behaves very much like a dipole as far as the resonances are concerned. A closed stub is actually equal to a folded-up dipole. We take a 2.2 m. long piece of 300 ohm twin lead and put it up, insulated, as we did with the dipole. At one end a small loop closes the stub. It is important to hold the g.d.o. near this loop at the end of the closed stub to get the resonances we are interested in. We should now measure the fundamental at about 29 Mc., and 10.3 m. is the corresponding wavelength. The stub is an electrical quarter wave long.

By comparing the geometrical and the electrical length we get the velocity factor of the cable, 4 × 2.2 ÷ 10.3 = 0.83 = 83%, which is not too far from the true value of 81%. The harmonics indicated by the g.d.o. are the third at 86 Mc. and fifth near 145 Mc.

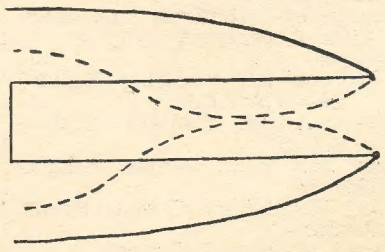


FIG. 2. Closed λ/4 stub. Fund. 3rd harm. Res at: 29, 86, 145 mc etc

This or similar tests with 70 ohm twin lead or co-axial cable will always have the same principle results, namely that besides the fundamental, only odd harmonics are present. With a 9 m. long stub of 300 ohm ribbon, all odd harmonics up to the 13th can be found between 7 and 91 Mc.

If we hold the g.d.o. near the centre of an open or closed stub we will also find resonance but these are different and not interesting with regard to our present problem. Fig. 2. We cannot, therefore, measure open stubs by coupling inductively the g.d.o. to the cable. But it is the usual practice to close the stub at one end and measure the resonances, which are identical to those of an open stub formed by the same cable.

4th Test

We have seen that a dipole is detuned when a reactance coil is placed in the centre, that a closed stub looks similar to a folded-up dipole, and that both have resonances at odd harmonics. It is, therefore, interesting to find out what resonances an open or closed stub will have if at one end an inductance or a capacitance is connected.

We use again the 2.2 m. long open stub made of 300 ohm ribbon. A small coil (7 turns, 4 cm. diameter, 2 cm. long) is connected to the open stub at one end. We will now find very different resonances (compare 3rd test) at 19.7 Mc., 40.5 Mc., 62 Mc., 113 Mc., 170 Mc., etc. The frequencies are by accident nearly now at even harmonics.

Changing the coil shows that we can shift the resonances over a wide frequency range by connecting a reactance across an open stub.

5th Test

The coil is now replaced by a 47 pF. capacitor and again different resonances are found, now near 35.5 Mc., 86 Mc., 140 Mc., etc. Using stubs of various length and of different cable (co-axial for example) will always have principally similar results.

6th Test

Repeating the tests with the same coil, or the capacitor, but closing the other stub end had the following different results: With coil—37.5 Mc., 88 Mc., 140 Mc., etc.; with capacitor—13.8 Mc., 58 Mc., 112 Mc., etc.

We know that an open stub is often compared with a series tuned circuit, and a closed stub with a parallel tuned circuit. We have now seen that both types of stubs are detuned by connecting reactances to them, as is so well known from both types of tuned circuits with lumped LC components.

It is therefore useless to tune a stub on its own at first and expect to maintain the resonances when this stub is connected to reactances like LC or dipole elements. We know that tuned

circuits are not detuned if a resistive component only is connected to them; only damping takes place.

The other case is when two tuned circuits with identical resonances and identical or different L/C ratios are connected in parallel, here again no detuning takes place (Fig. 3 and Fig. 4). This should be remembered if we wish to use a series tuned circuit or open stub as wave trap. They should be connected to a matched feeder, for example, which will not detune the trap.

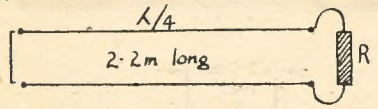
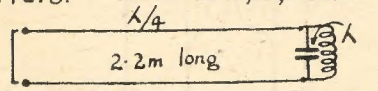


FIG. 3. Res at: 29, 86, 145 mc etc.



Open & Closed stubs not detuned.

We know that closed quarter-wave stubs are widely used as tanks of v.h.f. transmitters for example, and that the capacitive loading (valve, trimmer or tuning capacitors) is often reducing the stub to a small loop which is no longer regarded as a stub but as an inductor only. It may therefore be expected that a quarter-wave open stub connected to an inductor may in some way act like a capacitor and no longer as a wave trap. We get the well known combined effects of dipole, tuned feeder and aerial coupler, and we may therefore expect similar tuning effects and complex combinations if we use dipoles, inductive loading and stubs.

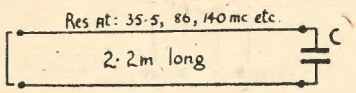
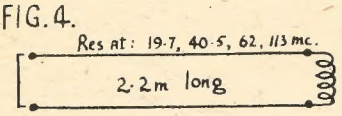


FIG. 4.



Open & Closed stubs detuned.

LOADED DIPOLES WITH STUBS OR L-C CIRCUITS

7th Test

We use the 7 m. long dipole. The resonances, before the loading coil is placed in the centre, are: 19.5 Mc., 60 Mc. and 100 Mc. We are not interested in harmonics of higher order at this stage. The 5 μH. coil, as already described (test 2), now changes the resonances to 14 Mc., 42 Mc. and 70 Mc. We now connect various lengths of 300 ohm twin lead parallel to the loading coil. In each case the capacity of the open stub is measured, which can be done with the help of the g.d.o., a suitable coil and a calibrated air capacitor. After closing one end of the stub we also determine with the g.d.o. the lowest resonance frequency of the stub. Fig. 5 shows the interesting result of this test.

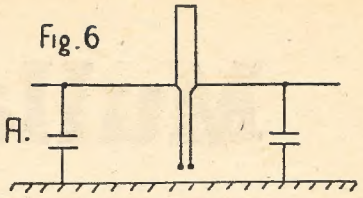
The accuracy of the various measurements is good enough to see the principle effects of the combined components. The 5th harmonic disappears as soon as a sufficiently large capacity replaces the open stub. This is important, because we see the L-C dipole has less resonances at higher and usually not wanted frequencies.

The most interesting fact is that over a wide range the open stub can be replaced by a capacitor of identical capacitance, as was expected (6th test). At about 2.4 m. stub length or at 40 pF. the resonance curves show a sudden jump near 10 Mc. and 20 Mc. 40 pF. together with the coil produces a lower resonance frequency, which is too low for the dipole length, and near about quarter-wavelength (geometrical dipole length), and the lowest resonance disappears. The stub dipole has a similar critical point at the second resonance. For the application discussed here, we do not have to investigate these critical points, because dipoles longer than quarter-wavelength are usually used to get satisfactory efficiency.

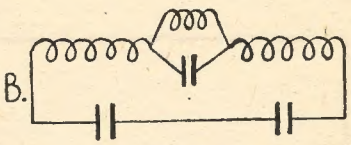
We see that the open stub, used to tune a dipole to a certain frequency, can be replaced by a lumped capacitance. The open stub is not a wave trap or aerial switch. It may also be mentioned that the coil could be replaced by an inductor of any other kind like closed stub, twin boom with shortening bar, or co-axial closed stub.

8th Test

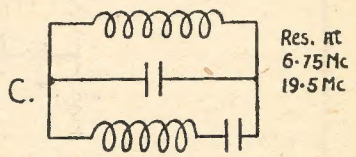
It can be demonstrated and it is generally accepted that an aerial is an open tuned circuit with distributed L and C. Fig. 6 shows the dipole with the capacity to ground and the capacity between dipole halves. We see also an equivalent circuit of the dipole with the parallel tuned circuit connected to it. The closed stub is replaced by a coil and the open stub is shown as a capacitor. Finally, we see at the right the combination of the series tuned circuit (dipole) and the parallel tuned circuit (open and closed stub), which is nothing but the well known tank.



Dipole with stubs.



Equivalent circuit.



Twoband tank. (multiband.)
A.B&C. three Similar arrangements.

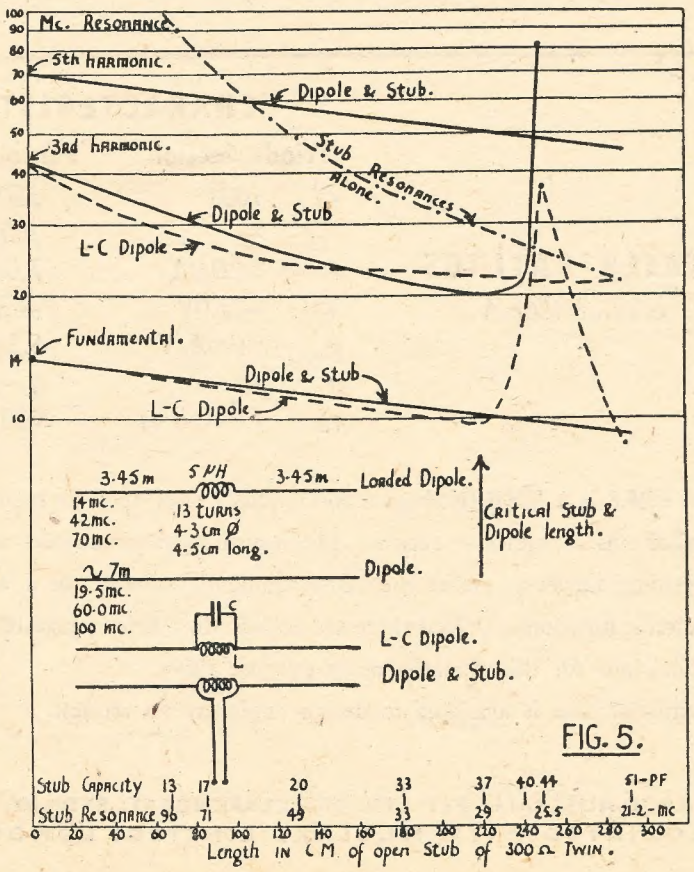
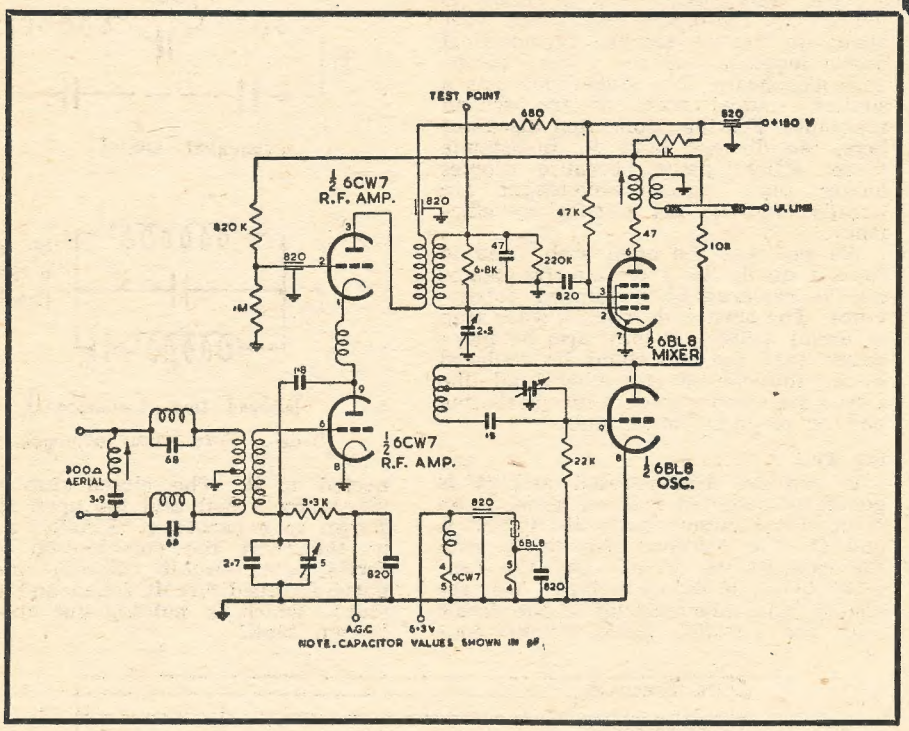
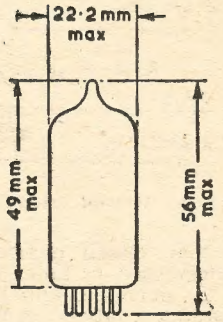


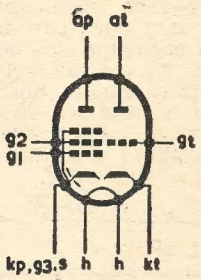
FIG. 5.

Mullard
TELEVISION VALVES

6BL8
TRIODE PENTODE





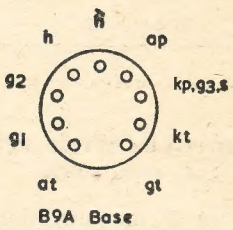


CHARACTERISTICS

	Triode Section	Pentode Section
V_a	100V	250V
V_{g2}	—	200V
I_a	14.0mA	7.0mA
V_g	— 2.0V	— 3.2V
g_m	5.0mA/V	5.5mA/V
u	20	$g_1 - g_2$ 47
r_a	4.0 Kohms	900 Kohms

HEATER RATINGS

6.3V at 430mA



B9A Base

The 6BL8 is a VHF triode-pentode specially developed for oscillator-mixer applications in television tuners. The use of separate cathodes and internal screening, however, makes the 6BL8 eminently suitable for a wide variety of circuit functions. Indeed there are no less than fifteen possible television applications for this versatile multi-purpose valve.

Additional data is available to design engineers on request.

Mullard

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TECHNICAL SERVICE DEPARTMENT

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M57

Many of us use multiband tanks in transmitters and we know that they always have two resonances at the same time. The following test will convince us: The parallel tuned circuit consists of a 25 pF. capacitor and a coli (24 turns, 3.5 cm. diameter, 6 cm. in length). The series tuned circuit is formed by a 25 pF. capacitor and a smaller coil (15 turns, 3.5 cm. diameter, 3.5 cm. length). The g.d.o. will measure resonances near 6.75 Mc. and 19.5 Mc. It is well known that with variable capacitors of 120 pF. resonances from 3 to 30 Mc. can easily be achieved if suitable coil sizes are chosen. The same should be true for a dipole with a parallel tuned circuit in the middle. This is therefore the way to construct an aerial which can be used on two Amateur bands like 14 and 21 Mc. for example.

9th Test

A few v.h.f. tests are also very instructive. We use a dipole of 2 m. length which has a self resonance of about 75 Mc. We place a small coil in the middle of the dipole so that now the lowest resonance frequency lies at 50 Mc. and the next harmonic will be found near 150 Mc. A 58 cm. length of 70 ohm twin lead gets closed on one end, and the g.d.o. will measure a resonance at 75 Mc. for this electric quarter-wavelength of cable, which will now be used as open stub (removing the short at one end).

Some inventors claim that a stub parallel to the inductor will cause the dipole to have now 50 Mc. and 75 Mc. resonances. From the foregoing tests we know that we can expect very different results, and we are not surprised to find resonances near 36 and 108 Mc. (Fig. 7.)

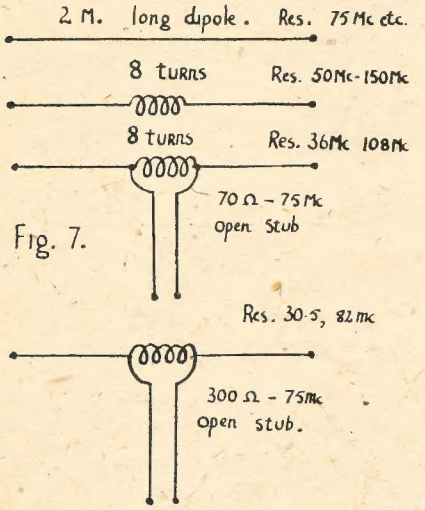


Fig. 7.

According to that which has been published as "Switching Stub Theory," it should not make any difference what type of cable is used to make the open stub, as long as the stub is tuned to the original (shortened loading inductance) dipole resonance, because we also know that any type of cable is suitable to make a stub which resonates at the required frequency.

We therefore repeat now the test with a 86 cm. long piece of 300 ohm twin lead 75 Mc. open stub. The resonances are again different and near 30.5 Mc. and 88 Mc. We could repeat the test with co-axial cable, etc., and we will always see that the resonance of the stub alone has nothing directly to do with the resonances the loaded dipole will exhibit. It is the capacity of the cable only which counts in these cases.

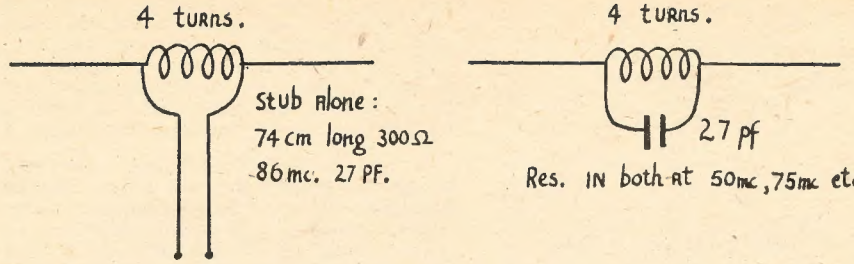


Fig. 8. Resonance of 2m long dipole with 4 turn coil (without stub) 56 mc. & harm.

10th Test

We have so far been using a coil with 8 turns of about 1.5 cm. diameter between the dipole halves. Reducing the coil to 5 turns, using an open stub of 300 ohm twin lead (74 cm. long, of 27 pF. and 86 Mc. self resonance) parallel and the 2 m. long dipole gives now resonanees at 50 Mc., 86 Mc., and 153 Mc. Using only 4 turns had the desired result, because the resonances were now at 50 Mc. and 75 Mc. and also at higher frequencies. The inductor had to be greatly reduced so that the dipole with the 4 turn coil—without open stub—resonated at 56 Mc. (no longer at 50 Mc.). Replacing the stub with a capacitor of identical capacitance of 27 pF. resulted again in the 50 Mc. and 75 Mc. resonances (Fig. 8).

From this example we can see that it must be possible to make a two-band dipole for 14 Mc. and 21 Mc., or 21 Mc. and 28 Mc., applying the found principles, e.g. placing a parallel tuned circuit in the middle of the dipole. The length of the elements is not critical because the tuned circuit can replace lacking C or L, as is often done by using an aerial coupler, tuned feeder and dipole.

TRI-RESONANT CIRCUITS

We have seen that the combination of two capacitors and two inductors gave a two-band tank or two-band dipole within a 1 : 2 frequency range. The writer was now looking for possibilities of achieving three resonances simultaneously within this range. A suitable combination of three capacitors and three inductors should make this possible. Two methods were investigated. Fig. 9 shows the tri-band tank circuits developed by the author. In (A) three tuned circuits are connected in parallel, two are series and one is a parallel tuned circuit.

11th Test

Two coils have 15 turns and one 24 turns, the coil diameter is 3.5 cm., the coil length is 3.5 cm. and 6 cm. The capacitors used have 20 pF., 47 pF. and 30 pF. capacity. Three resonances were found with the g.d.o. near 5.15 Mc., 12.5 Mc. and 22 Mc.

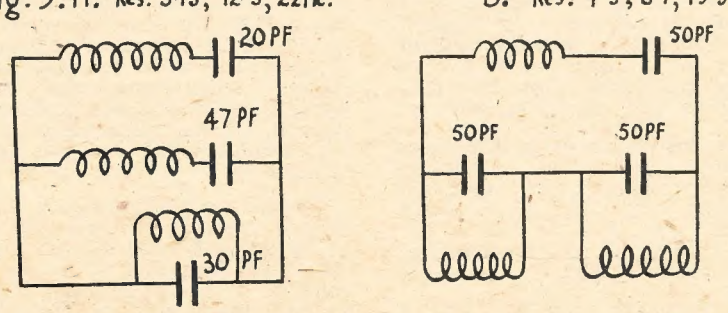
In Fig. 9 (B) two parallel tuned circuits are connected in series and to these a series tuned circuit is connected in parallel. The abovementioned coils are again used and three capacitors of 50 pF. each are employed. With the g.d.o. resonances near 4.5 Mc., 6.7 Mc. and 19.5 Mc. are found. These are only examples showing two possibilities of how to make a tri-band tank which may also be considered as equivalent circuits for tri-band aerials. In this case one of the series tuned circuits can take the place of the dipole. The parallel tuned circuits may either be of lumped components or open and closed stubs.

TRI-BAND DIPOLES

12th Test

We will now describe several versions of the practical design employing the two principal circuits.

Fig. 10—The 7 m. long dipole is again used and the 5 μH. coil and an open stub 2.15 m. long of 300 ohm ribbon are connected to the centre. The dipole forms a series tuned circuit and the coil with the stub represents a parallel tuned circuit. The resonances are 13.9 Mc., 22 Mc., 54 Mc., 69 Mc., 100 Mc., etc.



L-C Combination with 3 Resonances or equivalent circuits for triband aerials. [dipoles].

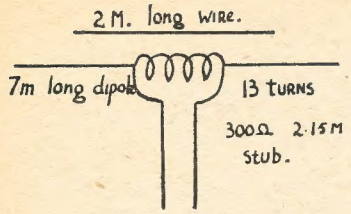


Fig. 10. Res without 2m wire, 13·9, 22, 54, 69, 100mc. With 2m. wire, 12·8, 21, 40mc etc.

We now fasten close to the dipole a 2 m. long insulated wire, which is a further short dipole closely coupled to the main dipole. A similar arrangement has become well known as proximity dipole. Now the resonances will be found near 12.8 Mc., 21 Mc., 40 Mc. We see the strong detuning effect the short dipole has. This method may be one way to get three resonances close together.

13th Test

The same stub, coil and dipole are used, but the short dipole is replaced by the series tuned circuit formed by a 5 pF. capacitor and a coil with three turns and 4 cm. diameter. The first three resonances are now near 13.4 Mc., 23 Mc., 34 Mc., which means that they are fairly close to the frequencies we are interested in (14, 21 and 28 Mc.). The same resonances were achieved after the open stub was replaced by a 38 pF. capacitor. This was the capacity of the open stub.

It is quite possible that a metallic mounting channel holding dipole, coil and stub, has a similar effect as the short dipole or small series tuned circuit (Fig. 11).

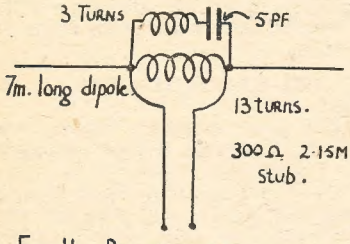


Fig 11. Res. at 13·5, 23, 34, 96 mc.

14th Test

The 7 m. long dipole has this time a smaller coil (7 turns, 4 cm. diameter, 4 cm. length) in the centre. An open stub of 300 ohm ribbon (1.85 m. long, self resonance at 33 Mc., capacity of stub: 34 pF.) is connected in parallel to the coil. The stub is hanging straight down from the horizontally supported dipole. The resonances are 15.8 Mc., 23 Mc. and 56 Mc., etc. (Fig. 12c).

If we now fasten the open stub close to one dipole wire to get maximum coupling, the resonances are very much different (Fig. 12a). The g.d.o. shows 14.8 Mc., 22.5 Mc., and 30 Mc. as the interesting resonances, the next higher resonance was at 57 Mc.

In this particular case we had a dipole with resonance at or very near to four Amateur bands. In practice one would use tubular dipole elements and the open stub would be pushed into the tubing. As already mentioned we can also use a twin boom as closed stub or loading inductance. If we push the open stub down the tubing of a twin boom, used as closed stub, the result would be somewhat similar as far as the resonances are concerned.

If we place only half the open stub along the dipole and the other half is hanging down perpendicularly, the resonances are again different, as expected, and now near 15.5 Mc., 22.8 Mc., 32.5 Mc., 52.8 Mc. and 75 Mc. (Fig. 12b).

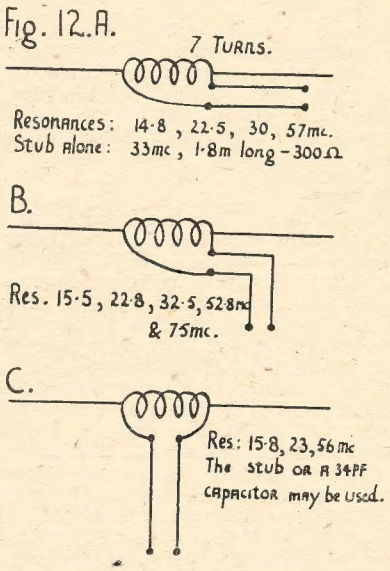


Fig. 12.A.
7 Turns.
Resonances: 14·8, 22·5, 30, 57mc.
Stub alone: 33mc, 1·8m long - 300Ω
B.
Res. 15·5, 22·8, 32·5, 52·8mc & 75mc.
C.
Res: 15·8, 23, 56 mc
The stub or a 34PF capacitor may be used.

By selecting a certain dipole length, coil size, stub length, stub cable type and position of stub to the dipole or closed stub, we can change the resonances of the multiband dipole in various ways and over a wide frequency range.

15th Test

Many tests were made with the other version, where two parallel tuned circuits are in series and both are in parallel to a series tuned circuit. Fig. 13 shows the set-up.

The dipole was made from ¼" dural tubing, and each half was 97 cm. long. One parallel tuned circuit had a 4-turn coil of 1.5 cm. diameter and 27 pF. were placed in parallel, whilst the other circuit was formed by a 2-turn coil of the same diameter and a 15 pF. capacitor was parallel connected. Without being connected to the dipole the tuned circuits had resonances near 58 Mc. and 90 Mc. The dipole with shortened circuits had a resonance near 75 Mc., whilst with the parallel tuned circuits functioning, the resonances were at 50 Mc., 75 Mc. and 100 Mc. as desired, and no other resonances could be found, which is an important feature.

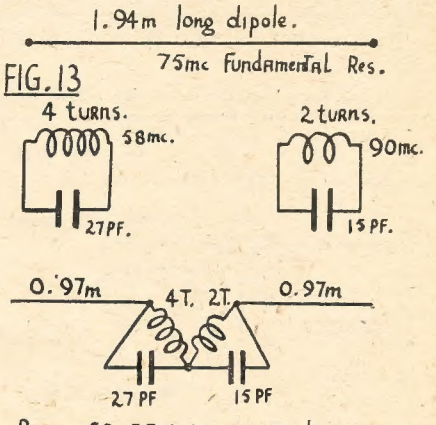
Several aerials were built and investigated applying this principle of tuning a dipole to three desired frequencies which do not have to be harmonically related. If a dipole has resonances at several predetermined frequencies, it is no prbolem to combine several of these L-C tuned dipoles to form Yagi type arrays with the radiator, reflector and any number of directors. But other aerial types may also employ the tuning principle outlined.

Tests were made with a small oscillator and dipole as transmitting aerial working at v.h.f. As receiving aerials various arrangements were used to compare the gain and effectiveness of a full size reference dipole, shortened dipole, two and three element full size, load and L-C tuned beams. This number of tests could be made easily with the v.h.f. set-up, because the aerial had only to be a few feet high and distances of several wavelengths were easily accommodated in the backyard.

Since the frequency ratio of 50 Mc. to 75 Mc. and to 100 Mc. is equal to the ratio of 14 Mc. to 21 Mc. and to 28 Mc., the v.h.f. tests gave a good idea of what could be expected at lower frequencies.

Summing up, it can be said that the test results were so encouraging that the writer decided to convert the three element 20 m. minibeam, which had done a fine job the last two years, to a tri-band beam with L-C tuned elements similar to Fig. 13 and as just described.

The tests and measurements discussed may have changed the way of thinking of quite a few readers as far as the function of multiband beams is concerned. The different possibilities indicate that we are now only at the beginning of a new development. It is hoped that other Amateurs make tests along similar lines to check the various published theories and to develop further multiband aerials.



This paper refers only to those types of multiband beams where in any case the full length of the elements is radiating energy (unlike the W3DZZ type). It is also quite possible that other multiband beams will be described in technical magazines in the future which can be analysed in the same way and which may use the same principles outlined above. Before commercial use is made of these principles it may be advisable to check the patent situation with the authors of these publications, even when we know that most of the patent applications will never become a patent because they are often neither new, technically correct nor an invention.

The triband beam now in use at VK2AOU will be described later.

AMATEUR TELEVISION

PART THREE

BY E. E. CORNELIUS,* VK6EC/T

THE CAMERA CONTROL UNIT

This unit serves three purposes in a t.v. transmission chain:—

1. To process the camera signals and make them suitable for transmission.
2. To provide monitoring and supervision of the outgoing signal.
3. To relieve the cameraman of much of the electronic controls of his camera, for which he has neither the time or the hands.

1. The video signals from the camera, as monitored on the viewfinder, will need supervision and correction of the following:—
   (a) Setting of black level,
   (b) Provision of set-up,
   (c) Insertion of standard blanking,
   (d) Addition of composite sync.,
   (e) Control of relative sync. and black level,
   (f) Grey scale (gamma) correction.

2. Monitoring involves a good quality picture viewed under controlled lighting conditions, as compared with the viewfinder which is not, and a calibrated c.r.o. presentation of waveforms for checking of 1 (a) to (e), continuously during transmission.

3. The camera control unit can take over from the cameraman, control of focus, beam current and target potential, as well as correct the video level changes due to changes of lighting and scene. The cameraman is fully occupied with pan and tilt and dollying of his camera, and the maintenance of optical focus. The c.c.u. provides all these functions, and a block schematic is shown in Fig. 13.

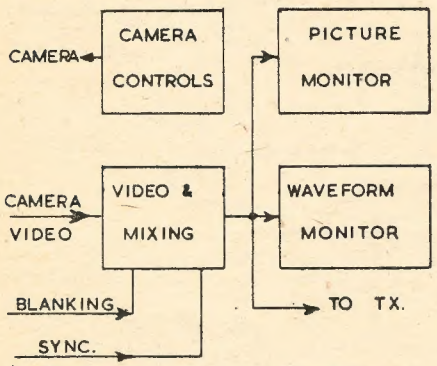


FIG. 13 – C.C.U BLOCK SCHEMATIC

The camera control unit also acts as distribution point for power and driving pulses to the camera. The four pulse trains from the sync. signal generator are best distributed in light 75 ohm co-axials, although a co-ax. type of microphone cable, of impedance about 100 ohms is available quite cheaply. I distribute these pulses via 6-pin plugs, with pins 2 and 5 earthed to the shields. The camera control unit, mixer and monitor all require sync. generator pulses. By looping in and out of each unit, a termination can be applied at the last unit. See Fig. 14.

A dummy plug, with terminations for sync. and blanking can be used in the c.c.u. output socket, when these are not to be extended further. The camera terminates line and frame drive.

Fig. 15 shows a circuit diagram of the unit, with the four parts clearly indicated. The video section will be discussed first.

Video and Mixer

Video from the camera sees a 75 ohm termination in the input **Video Level** potentiometer, which should be a carbon type if possible. A 100 ohm pot. with a 300 ohm carbon resistor in parallel will serve. This is a front panel control. The first video amplifier V1 is a 6AU6 delivering a black positive signal to V2. In this stage, blanking is inserted from V3, a 6SN7, by means of the common 750 ohm resistor in the anode circuit. The two halves of the 6SN7 act as a blanking clipper, to clean up any "grass" on the incoming blanking signal, and for polarity inversion. The **Clipper** control is preset, its adjustment being discussed later.

V4 and also V8 and V11 are keyed clamps, providing line-by-line clamping. A discussion of their operation would be out of place in this paper, but they are treated in full in any standard textbook. But among other features, the clamp suppresses hum, and restores d.c. transmission characteristics at the point of connection.

The 6AU6 (V5) is a blanking clipper, and sets black level for the system. The front panel control **Black Level** adjusts its bias, and hence the clipping level, via the clamp V4. The 6H6 (V6) acts as a white clipper, and should be a 6AL5 for best performance. It clips off white "spikes" which would cause negative polarity overmodulation of the transmitter, and intercarrier buzz in an intercarrier type of receiver. The preset control **White Clipper** is set to clip at the equivalent of 12½% modulation. Note that the true plate load of V5 is 400 ohms, plus the internal impedance of the 6H6 clipper, and of the voltage regulator V7B. The voltage regulator V7 stabilises the screen voltage of V5 via V7A, and its anode voltage via V7B, enabling the white clipper control to be set and forgotten; V6 can be replaced by two germanium diodes of the 150 volt type.

This stage is followed by another clamp V8, clamping the grid of V9, which is arranged as a gamma correcting stage. A short discussion on gamma may be useful. Overall gamma may be roughly defined as the ratio of brightness of two points on the reproduced image, as to their ratio in the original scene. An overall gamma less than unity would result in a washed out picture, like an underexposed negative, and a gamma greater than unity gives a "soot and whitewash" picture lacking detail in the blacks.

Any picture tube has a gamma of the order of 1.5 to 2.0, resulting in this black compression. This must be compensated in the transmitter chain. The vidicon has a gamma slightly less than unity, but further correction is needed.

The 6AU6 (V9), without the gamma network in the cathode, has a gain slightly less than unity, and this applies at low level inputs, when the gamma diode is biassed off. The polarity is such that low level corresponds to white and light greys. As the input voltage increases running towards black, the diode starts to conduct, and increases the gain by reducing cathode degeneration, thus "stretching" the blacks, and compensating for the picture tube compression. The **Set Gamma** control is preset, and once adjusted may be forgotten.

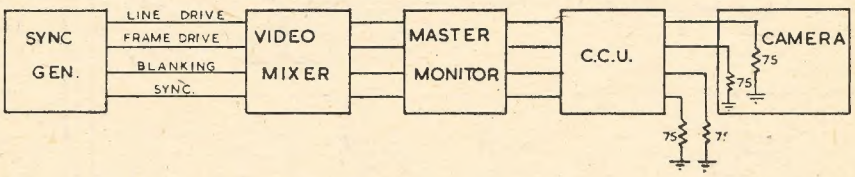


FIG. 14 – PULSE DISTRIBUTION

The cathode follower V10B is designed for use as part of the gamma correction circuit, with a gain control in its cathode circuit. Thus the set gamma control sets the onset of correction, i.e. at which part of the grey scale, and the gain control sets the ratio or law. As yet this last has not been incorporated, but if required would consist of a 1,000 ohm pot., 1,000 ohm resistor, and 100 μF. 40 volt electrolytic, all in series, from the cathode of V10B to earth.

This stage is followed by another clamp V11, then to the feedback output stage V12, 13 and 14, which is essentially similar to the output stage in the camera, although the 6V6 has additional output capability to deliver 1.4 volts peak to peak composite video to a 75 ohm line. It need not be discussed further.

Composite sync. is added in V15, with a panel control **Sync. Level** to control the sync. amplitude to the desired —40 units referred to black level.

The 6SN7 V10B inserts a fixed amount of blanking, termed "setup", which ensures that no black picture

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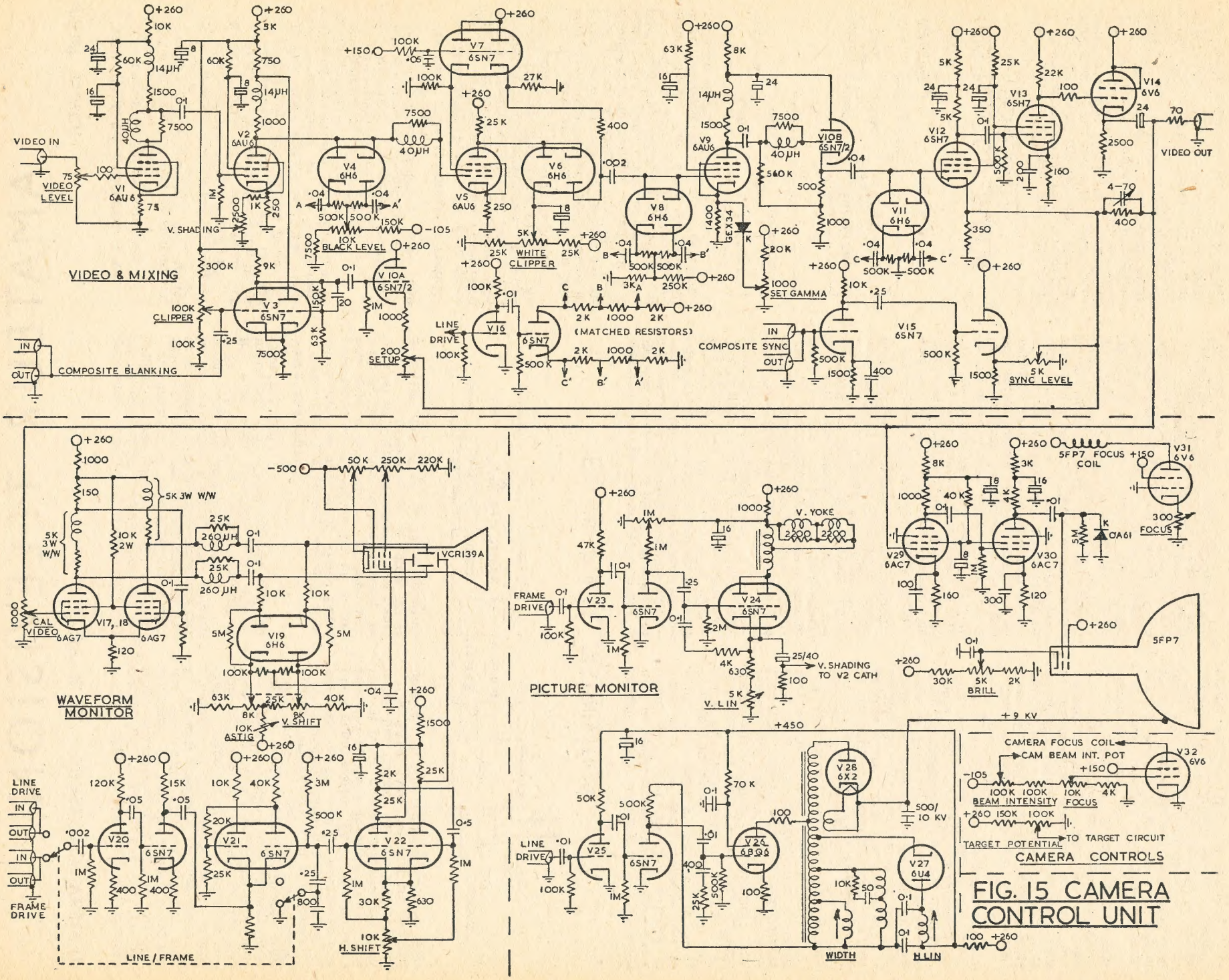


FIG. 15 CAMERA CONTROL UNIT

signals ever encroach on the sync. area, no matter how the black level control is set. A preset control **Setup** sets this to about 5% of picture level.

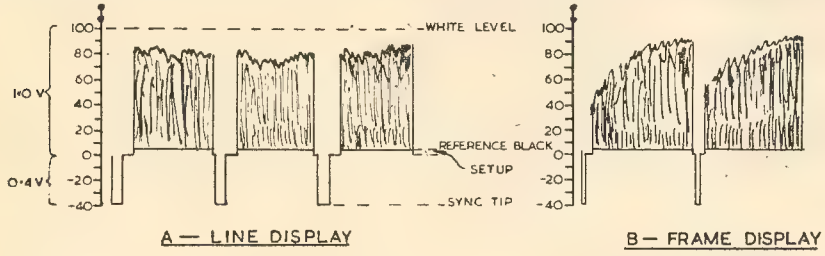
The clamp keyer tube V16 supplies keying pulses to the three keyed clamps and must be connected such that the positive going pulses from V16B cathode go to the clamp anode side, and the negative pulses from V16B plate to the clamp cathode side. In this circuit clamping occurs on the blanking pedestal in synchronism with line drive, which is early. Ideally we should clamp on the back porch, and a circuit is being devised to delay the pulses to do this.

The next unit to be described is the waveform monitor, a c.r.o. designed especially to obtain the maximum useful information from the video waveform displayed.

The horizontal deflection is by a reasonably orthodox time base, with a multivibrator designed to synchronise at one-third line rate, displaying three lines, Fig. 16A, and one half field rate (25 c.p.s.) to display one complete frame of two fields (Fig. 16B). The change from line to field display is by means of a switch, and the sawtooth constants are adjusted such that each display will be about the same width on the tube.

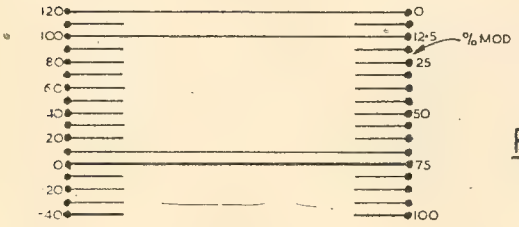
modulation percentage, and percent. of reference level, the black level must be stable. See Fig. 16C for graticule design. To clamp the black level in register with the reference line on the graticule, regardless of picture content, the 6H6 and its associated circuit is used. The dual 8,000 ohm pots. were used because they were on hand. 10,000 ohms would probably do. Preset controls **Shift** and **Astigmatism** are adjusted for black reference, and minimum deflection defocussing respectively. The e.h.t. for the VCR139A tube used is —500 volts, quite adequate if the tube is set back about 1½" from the front panel, inside a blackened tube. The e.h.t. network is right for the tube and voltage used. **Intensity, Focus** and the **Line/Frame** time base switch are the only panel controls. The display should be poled such that the black (sync.) is downward.

The picture monitor section is essentially similar to that in the viewfinder, and needs little discussion. A minor addition is the vertical shading facility. A 100 ohm resistor in series with the cathode bypass of the vertical output tube V24, develops a 1.6 volt p./p. sawtooth across it at field rate. This is taken via a shielded lead to the cathode circuit of V2 in the video section. The panel control **Vertical Shading** enables



A — LINE DISPLAY

B — FRAME DISPLAY



C — GRATICULE

FIG. 16—WAVEFORM MONITOR

The c.r.t. plates are direct coupled for horizontal deflection, and horizontal shift is obtained by a preset control in the grid cathode circuit of the 6SN7 output tube V22.

The vertical deflection amplifier is of course a wideband video amplifier. It is designed to have a slow roll off, and down 3 db. at 2 Mc., in accordance with R.T.M.A. standards. The anode load resistors need 60 μH. of peaking inductance in series, and this was found to be fulfilled reasonably well by the use of I.R.C. 5,000 ohm 3 watt vitreous resistors—wire wound. The component values in the anode of the left-hand 6AG7 (V17) should be checked to give equal drive on the grids. Adjust the **Cal. Video** control for full graticule deflection at 1.4 volts peak to peak with sync.

The outputs are capacity coupled to the c.r.t. vertical plates, with a clamping circuit (V19). As a graticule is used in front of the c.r.t., calibrated in the top of the picture to be made brighter than the bottom, and may be necessary to offset the inverse effect from the camera.

The video amplifier is somewhat different from that in the camera in that the first 6AC7 has low gain and a rising h.f. response. The second has high gain and reasonable voltage output by virtue of the 4,000 ohm anode load resistor. This stage has a falling frequency response, to complement its mate. This method is practicable because signal high frequency components rarely have high amplitude and the second stage is not overloaded. The overall response of the amplifier is flat to 6 Mc.

Camera Circuits.—The c.c.u. has panel controls for camera **Focus** and **Beam Intensity,** and a preset control for **Target Potential.** These were discussed when describing the camera, and an optional focus circuit shown.

Layout.—This is again a matter of convenience, but is controlled mainly by the two cathode ray tubes and the panel controls. The panel layout used is shown in Fig. 17, as one basis of design. The video and mixing section is along the bottom, with the main controls, video, sync. and black level at the bottom of the front panel. The next most important, the camera controls, are right centre.

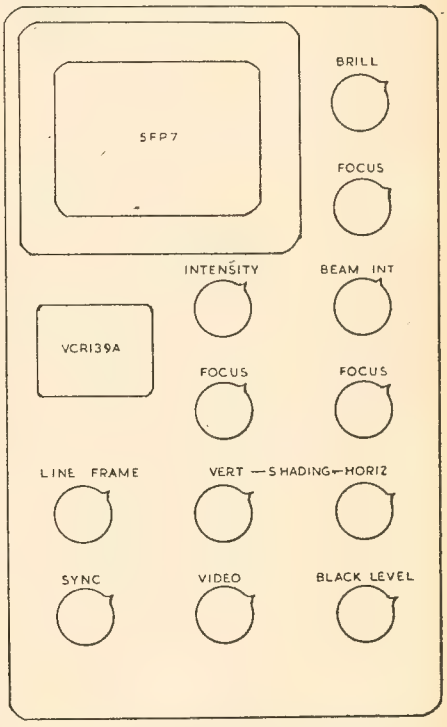


FIG. 17—PANEL LAYOUT

Simplification

In this case it is largely one of omission. A picture and waveform monitor are needed at some point in the chain and this is the most logical. But either or both may be omitted. Any of set-up, gamma correction, and white clipping may be omitted, but the clamp at the output of V2 is essential. Initially you need to retain V1, 2, 3, 4, 12, 13, 14, 15 and 16 in the chain, the omission of the two video stage V5 and V9 retains the correct polarity for the system.

Initial Adjustment

This assumes that the camera or a pattern generator is delivering a picture signal between 0.5 and 1.5 volts p./p. to the input. Check the waveform monitor for correct operation by removing V14 and injecting about 1.5 volts p./p. at say 1 Kc. into the output connector. This should give a c.r.t. display and bars on the picture monitor. Replace V14 and terminate the output in 75 ohms.

Turn off the video input by the **Video Level** control, reduce **Snyc.** to zero. Advance the **Black Level** control and adjust the preset **Clipper** control for a display of blanking pedestals (downward) with no tilt on the horizontal parts. See that the **Black Level** control has sufficient range to raise the pedestal to the full 1.0 volts on the c.r.t., and reduce it to zero. Reduce to

(Continued on Page 17)

ZEPHYR MICROPHONES

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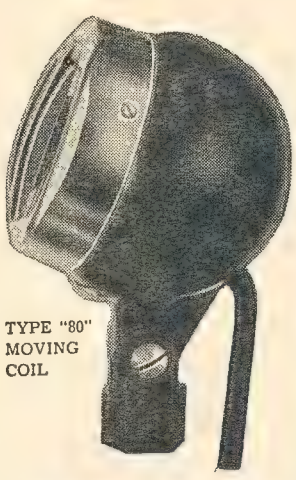
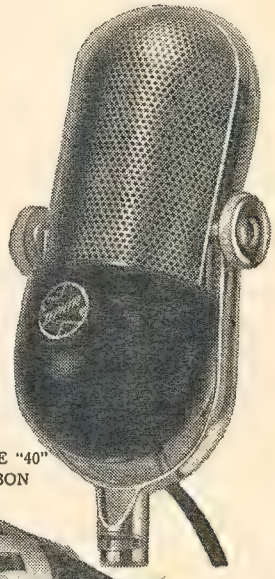


TYPE "80" MOVING COIL



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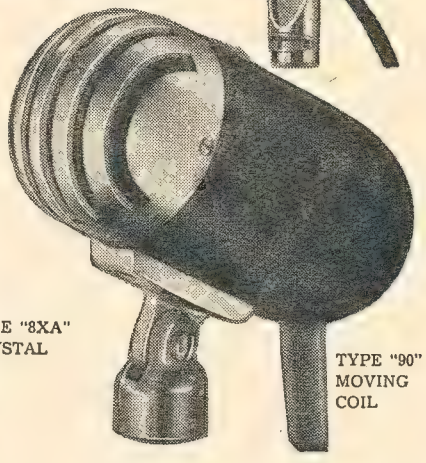

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Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

S.W.L. GROUPS

Editor "A.R.," Dear Sir,

As an active short wave listener and an associate member of the Victorian Division, W.I.A., I am very interested in the growth of s.w.l. activity within the W.I.A. as a whole.

However, I am rather perturbed at the apparent lack of interest in States other than Victoria, in the promotion and encouragement of Short Wave Listener Groups within the various Divisions of the W.I.A.

I might also add that this lack of interest does not apply only to the official bodies of the W.I.A. but to a large extent to individual Amateurs both members and non-members of the W.I.A. **This state of affairs is regrettable.**

For the benefit of those individual Amateurs I recommend that they take a look at the fourth point of "The Amateur's Code." This states, and I quote: "The Amateur is Friendly . . . friendly advice and counsel to the beginner . . ." etc. "These are marks of the Amateur Spirit." Whilst taking a look, many may benefit from reading the whole six points of the Amateur's Code through several times, and then asking themselves if they can truthfully say that they always abide by this Code of Conduct. So much for the individual.

It is now to the position of the W.I.A. that I wish to refer. This body has pledged itself to as far as possible protect the interests of Amateur Radio. It cannot do this and ignore s.w.l's. The s.w.l. of today is the raw material of the fully fledged Amateur of tomorrow. If new blood is not infused into the Amateur ranks, and fostered and nurtured in an organised manner the day when the Amateur will be a historical curiosity is not very far away.

With more and more services desiring more and more frequency allocations, and the number of active Amateurs slowly and surely decreasing, this is bound to happen if something is not done about it, and done NOW.

It is up to the W.I.A. to do its level best to see that this does not happen, and the most efficient method of carrying out this phase of self preservation is for each Division to ensure that it has an active organised S.w.l. Group within its administration.

Of course it will mean hard and, perhaps at first, almost heartbreaking work for some person or persons, but would not the result be worth the effort if it aids in preserving the present Amateur bands?

In each State where there is as yet no such Group active, I can name several keen s.w.l's. who have personally written to me decrying the fact that they do not have such a Group.

Perhaps the officials in these States will say they have tried, but the question is, "Do they realise the value in having such a Group, and have they tried hard enough?"

I am afraid that I have seen little or no publicity given to the proposed formation of Groups in the States concerned. WHY? If it is due to sheer lethargy on the part of office-bearers, it should not be tolerated by members. In that case the members have the remedy in their own hands.

Within the Victorian Division results since the formation of an S.w.l. Group have been encouraging. The Group was formed a little over three years ago and already approximately 16 of its members have passed the examination for either their A.O.C.P. or A.O.L.C.P. The Victorian Group has on its books 60 s.w.l's. registered with the Division. Assuming that 50% of these listeners were over the age of 16 years and financial for the three year period, and that I believe is a quite conservative estimate, it would mean that an amount of £220/10/0 had been paid by Group members in fees.

There are, of course, many other facets of S.w.l. Group activities which I cannot go to the lengths of enumerating here.

The fact is that on the basis of the matter laid out above, it is not a matter of "Do we want an S.w.l. Group within our Division?" but "Can we afford not to have an S.w.l. Group within our Division and miss the opportunities offered?"

I ask all right thinking and foresighted Amateurs to ask this question of their own Division.

There are several unselfish individual Amateurs doing their best to assist s.w.l's. and coach them for the exam., and to these gentlemen I wish to pay tribute.

—Ian J. Hunt (WIA-L3007).

[We commend this letter to the attention of all Divisional Councils.—Executive.]

AMATEUR TELEVISION

Editor "A.R.," Dear Sir,

I am interested in Amateur Television transmitting and have just received film strips from the British Amateur T.V. Club and hope to receive lecture tapes from the club soon.

I am endeavouring to contact others interested and hope, with the W.I.A's. help, we may be able to exchange information with other enthusiasts and perhaps form a t.v. group similar to the British one.

At the moment I only have simple flying spot gear, a 931A phototube and a 5FP7 c.r. tube.

Anyone interested could contact me on 7.1 Mc. at 1230 or 1800 hours, on most days, or at 75 Gheringhap Street, Geelong (Phone X 5674), or contact VKs 3ABK, 3AUX or 3AAK who are active in Amateur T.V.

—Bill Brownbill, VK3BU.

A WORD OF EXPLANATION

Editor "A.R.," Dear Sir,

For some time I have been interested in the complete explanation of s.s.b. and after a lot of delving into books, etc., I finally developed the explanations I was looking for and hence wrote the article.

As has been pointed out, the "proof of the pudding is in the eating." S.s.b. signals do seem to have much more "punch" behind them than would be expected and this I find it hard to explain. There are three possible reasons I can think of: (1) The peak power of the s.s.b. signal on the air is much higher than that stated. (2) When an s.s.b. signal is tuned it is tuned so that the sideband is in the centre of the resonance curve of the receiver, whereas in tuning an a.m. signal the carrier is in the centre and the sidebands are attenuated somewhat. Even the broadest receiver has a reduced response at plus or minus 3 Kc. (3) Some receivers are less sensitive to signals with weak carriers and hence give better performance with strong injected carriers. I think there may be more to it than this and I would be interested in any better explanation.

To suggest that the peak power of an a.m. signal is 400 watts and therefore a peak sideband power of 400 watts can be used is erroneous. The 400 watt peak is only instantaneous and does not represent the power contained in either the carrier or the sidebands. Using a similar argument it could be concluded that a peak s.s.b. power of 150 watts would be legitimate.

I trust I have left no hard feelings with the s.s.b. gang for I am actually quite partial to the system. The wording of the article may have been a bit drastic.

—J. A. Adcock, VK3ACA.

NATIONAL FIELD DAY CONTEST

Editor "A.R.," Dear Sir,

Judging by the amount of space devoted in the March issue of "Amateur Radio" promulgating the result of this year's Contest, one can only assume that the number of entries was very much smaller than in previous years.

I know the Federal Contest Committee has endeavoured to make this event more popular (and to please everyone), but they appeared to have achieved a reverse effect.

Twice in the last three contests the rules have been loaded against portable equipment NOT operating on two metres.

While the two metre sations can work placidly the numerous others on this band in and around the capital city, the station on (say) 7 Mc. has to battle against QRM for many more operating hours to obtain a similar number of contacts. However, the latter station does have solid Interstate contacts in addition to Intrastate ones and so proves the general efficiency of his equipment under adverse conditions.

I would like to point out that the frequencies used during emergency work over the past few years were mainly in the region of 7 and 3.5 Mc. and it is considered safe to assume that similar frequencies would be the most reliable in future emergencies under the W.I.C.E.N. organisation.

Minor roles might be allotted to v.h.f. stations for close contact work, but I consider the foregoing emphasises the point I am trying to make and that is—as the v.h.f. and low frequencies are like poles apart, they should not be brought into competition with each other in our N.F.D. Contest.

Taking into account the number of participants and the overall general interest, I would say that the Contest staged under the 1957 rules was the most successful for many years.

May I suggest to the Contest Committee that they cease varying the rules each year and settle on one set of rules to govern the competition. Even the rules of a few years ago were con-

sidered satisfactory, the only objection being that it was of 24 hours duration. However, perhaps these are only my views; those of other participants, and particularly of those who have dropped out of the Contest over the years, would be of interest.

—Geo. E. Every, VK3GE.

ZL AND VK CONTACTS

Editor "A.R.," Dear Sir,

Greetings from Cambridge. It may interest your members to know that during the year 1957 I had 723 contacts with New Zealand and 192 with Australia.

The star station was—as usual—Jim ZL2BE with 410 QSOs.

Other main scorers in my log were:

ZL1WT	7	ZL3BG	5
ZL1GJ	6	ZL3IE	5
ZL1VY	6	ZL4KE	30
ZL2AFA	11	ZL4BX	29
ZL2AHM	6	ZL4HE	22
ZL2RR	5	ZL4HJ	12
ZL3RB	14	ZL4IG	9
ZL3TH	11	ZL4LZ	7
ZL3BL	7	ZL4GC	5
VK2AMG	29	VK3BK	6
VK2WT	10	VK3HG	5
VK2OQ	6	VK3JA	5
VK2ASQ	6	VK3KL	5
VK2ALL	5	VK4BG	6
VK3JK	6	VK5MS	8

—B. M. Scudamore, G6BS.

OBLIQUE STROKE F.O.C.

Since publication of last month's magazine a letter has been received from F. T. Hine (VK2QL) on the subjects of F.O.C. and related matters.

Although the matter of Oblique Stroke F.O.C. has been closed, W.I.A. Federal Executive's comments are of interest:

"The attention of all licensed Hams is drawn to the obligation imposed on them to conform at all times to the Regulations, since this is a condition upon which licenses are granted.

"It is probably not inappropriate, also, to draw attention to the six articles of the Amateur's Code."

— . . . —

AWARDS

WORKED ALL YUGOSLAV REPUBLICS—W.A.Y.U.R.

The W.A.Y.U.R. Award is granted by Savez Radioamatera Jugoslavije to each Amateur throughout the world who submits proof of having established contacts with Amateur stations in each of six Yugoslav federal republics.

Overseas Amateurs other than from European countries must make two contacts per republic (12 contacts in all), working various Amateur stations (different call signs) of each Yugoslav federal republic.

Contacts with the Amateur stations in each federal republic must have been made on two Amateur bands at least.

The call signs of the federal republics are as follows:—

YU1—Srbija (Serbia).
YU2—Hrvatska (Croatia).
YU3—Slovenija (Slovenia).
YU4—Bosna i Hercegovina (Bosnia and Hercegovina).
YU5—Makedonija (Macedonija).
YU6—Crna Gora (Montenegro).

Contacts may be on c.w. (T8 at least) and/or phone (R3 at least) after 1st February, 1950.

QSL cards must accompany applications, and a summary sheet with following data: call sign, received report RST or RSM, Amateur band, and 5 I.R.C's. (for foreign Amateurs).

Applications for the W.A.Y.U.R. Award, together with QSL cards, summary sheet and coupons should be sent to S.R.J. (for W.A.Y.U.R.), Post Box 324, Beograd, Yugoslavia.

EMERGENCY NETWORK OPERATES AFTER QUEENSLAND CYCLONE

You will have all heard via the radio news and newspapers that a cyclone had again struck in North Queensland during the evening of 1st April, doing tremendous damage of over one million pounds. The township of Bowen and surrounding district was severely hit. Wind gusts of up to 110 miles an hour were recorded.

At 11.30 a.m., April 2, Don VK4PW, who is situated at the Coalfields at Collinsville, 53 miles from Bowen, came on the air with emergency traffic from the Police Department as all means of communication had been disrupted. After calling for a long time, he was heard at 1.30 p.m. by Harry VK4LE, of Adventure Downs, who in turn relayed to Police at Springsure. They immediately contacted Rockhampton Police, giving a survey of the damage.

At 5 p.m., VK4RW had his aerial re-erected after being blown down the previous week and was ready to take messages from Don VK4PW for broadcast over Radio Station 4AY re river heights, which was promptly relayed by Railway Department telephone to Ayr. The Railways also being alerted.

Third message received at 6.4 p.m. and relayed to John VK4DK at Ayr 6.20 p.m., who, after being alerted, came on the band. VK4WI came on at 7.10 p.m. to get information for Authorities in Brisbane, and heard contacting VK2WI to keep channel clear on 7060 Kc.

Bert VK4WI again came in at 9.30 asking for repeats of messages 2 and 3, stating that he could not find Bowen River on his map. Last message for the night of the river height was passed at 10 p.m., when Bowen River had risen to 56 feet. Stations signed out at 10.45 p.m., after making schedules for 7 a.m. next morning.

At 6.55 a.m. John VK4DK and Bob VK4RW contacted Don VK4PW and advised the river had risen to great height. There was no reading as communication with Birralee had been broken. Next sked at 9.30 a.m. to take two Police messages and message from Postmaster seeking permission to send public telegrams.

Bob VK4RW passed messages to the appropriate channels and alerted the Radio Inspector, who came in at 10 a.m. with VK4AA and arranged for a patch line to the P.M.G. Townsville operating room. Don VK4PW was kept busy during the day handling P.M.G. traffic with the assistance of the local Postmaster.

John VK4DK came on at stated times to obtain river reports; the highest reading taken before gauge was covered being 70 feet. Vern VK4LK did yeoman service on the Flying Doctor Service network, collating reports from outside stations.

P.M.G. traffic ceased about 5.25 p.m. when VK4AA made schedules for the evening, leaving the receiver running until midnight. Bert VK4WI called in again on the hook for latest information at 7.45 p.m. and arranged for Jim VK4PR to listen in case VK4WI was required.

The schedule at 9 a.m. on Good Friday was held by VK4AA, VK4RW, VK4PW with Mark VK4MJ on the side fence; Mark had monitored at all times. Sergeant Gill, of Collinsville, came on the mike at VK4PW and personally thanked the following stations: VK4AA, VK4PW, VK4LE, VK4RW, VK4DK and others who had helped. VK4AA thanked the Sergeant on behalf of Radio Amateurs and said that is the aim of the boys to give assistance when needed.

As telephone communication, at the time of writing, will be out for a few more days, only Don VK4PW will be working with VK4AA.

"Well done gang!"

Low Drift Crystals

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ACCURACY 0.02% OF STATED FREQUENCY

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12.5 and 14 Mc. Fundamental Crystals, "Low Drift," Mounted only, £5.

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ROSS HULL V.H.F. CONTEST RESULTS

1957-58

OUTRIGHT WINNER:

VK4BT—N. W. Atkinson .. .... 578 pts.

TROPHY WINNER:

VK3ALZ—I. F. Berwick .. .... 563 pts.

AWARDS:

Phone—

VK2WH—W. H. R. Stitt .... 345 pts.
VK3ZAQ—D. H. V. Rankin .... 170 „
VK4NG—R. H. Greenwood .... 448 „
VK5AW—D. A. Carthew .. .... 299 „
VK6ZAV—D. F. M. Brown .... 55 „
VK7ZAI—D. A. H. Thorne .... 194 „

Open—

VK3ALZ—I. F. Berwick .. .... 563 pts.
VK4BT—N. W. Atkinson .. .... 578 „
VK5BC—H. F. Lloyd .. .. 440 „
VK6WG—W. W. Green .. .. 262 „
VK7LZ—C. P. Wright .. .. 304 „
ZL2DS—K. R. Kirkcaldie .. .... 158 „

SCORES:

Phone—

VK4NG	448	VK7ZAI	194
VK4WD	383	VK3ZAQ	170
VK2WH	345	VK5ZBL	163
VK5AW	299	VK6ZAV	55
VK2ZBP	196	VK4ZAZ	ch. log.

Open—

VK4BT	578	VK6WG	262
VK3ALZ	563	ZL2DS	158
VK5BC	440	VK7PF	107
VK7LZ	304		

RECEIVING SECTION:

VK3—J. M. Hilliard .... 159 pts.
VK4—C. H. Thorpe .... 377 „

"CQ" WORLD-WIDE CONTEST PHONE RESULTS

In a short note accompanying the phone results of this contest, Frank Anzalone, W1WY, comments: "Again we are disappointed in the returns from 'Down Under'. As will be seen from the full results published in May 'CQ' the other areas did very well." The c.w. results will appear next month.

In the single operator section, the world winner was F8CH with 436,974 points obtained on all bands.

In the multi-operator section the world high and winner was K2GL with 866,250 points from all-band operation.

AUSTRALIA (Single Operator)

VK3HL	AB	14,742	86	28	35	B
VK4HD	28	17,078	114	22	31	—
VK4WF	21	17,485	103	25	40	B
VK5WO	AB	12,760	78	26	29	B
VK5AB	21	30,400	145	27	49	—
VK5XN	14	21,576	126	25	33	B
VK6RU	AB	197,098	374	71	116	B
VK7SM	14	2,508	40	10	12	B

NEW ZEALAND (Single Operator)

ZL1MQ	AB	49,946	163	53	60	B
ZL1KW	28	52,316	305	20	38	B
ZL4BO	21	54,990	214	30	64	—
ZL1ACI	14	53,756	232	31	58	—

"ISRAEL MARATHON" CONTEST

To celebrate the Tenth Anniversary of the Independence of the State of Israel, the Israel Amateur Radio Club, under the auspices of the Tenth Anniversary Committee, is inaugurating a world-wide contest-marathon, which will be known as the "Israel Marathon".

Foreign Amateurs are to try to contact as many Israeli stations as possible during the marathon. Frequency bands on which contacts can be made are 3.5, 7, 14, 21 and 28 Mc.

The marathon started at 0001 hours GMT on 24th April, 1958, and ends on 31st October, 1958, at 2359 hours GMT.

Any two-way contact between an outside and an Israeli Amateur Station, using any type of transmission. Each Israeli Station can be contacted once on every band during any 24 hours. Signal reports are to be exchanged, the minimum reports are to be RS 33 for telephony and RST 338 for telegraphy.

Each valid QSO on 3.5 Mc. will score 3 pts.
„ „ „ „ 7 „ „ „ 2 „
„ „ „ 14, 21, 28 „ „ „ 1 „

The total number of points on all bands are to be added.

Amateur radio stations from each continent returning the highest valid scores will be adjudged winners of the contest.

The first three Amateur stations from each country, submitting the highest score.

The first prize for each continental winner (6) will be a cup offered by the State of Israel, on which the name and the call sign of the winner will be engraved.

The second prize for each continental winner will receive an artistic book on Israeli art.

The first three highest scorers from each country will receive a Diploma. Every station submitting a log will receive a Participation Certificate.

Station log extracts with claims must reach the Israel Amateur Radio Club on 15th Jan., 1959. Prizes will be distributed on the 11th day of Independence of the State of Israel, and will be made by a representative of the Government of Israel wherever possible.

CASABLANCA INTERNATIONAL FAIR CONTEST

On the occasion of the Casablanca International Fair, the Association des Amateurs Emetteurs du Maroc will sponsor an international contest among Radio Amateurs all around the world.

A trophy to be called Casablanca International Fair Cup will be awarded under the following conditions:

The offitial station of A.A.E.M. will transmit under the call CN8MC during the total period of the Fair, from 25th April at 1100 hours to 10th May at 2300 hours GMT. This station will work alternatively on the following bands:

40 metres from 1400 to 1600 hours GMT
10 „ „ 1600 „ 1700 „ „
15 „ „ 1700 „ 1900 „ „
20 „ „ 1900 „ 2300 „ „

This cup will be permanently awarded to the station having contacted CN8MC the most number of times. One contact per day per band will be allowed.

CN8MC will normally listen 10 Kc. up and down from the calling frequency.

Address for logs: Association Des Amateurs Emetteurs du Maroc, P.O. Box 2060, Casablanca.

— . . . —

AWARDS

THE AWARD HUNTERS' CLUB "A.H.C."

"A.H.C." is the official abbreviation for The Award Hunters' Club. This abbreviation can be used by the A.H.C. members in their station cards and correspondence.

A.H.C. is an International Club which is open to all Radio Amateurs interested in "hunting" Awards and Certificates. The A.H.C. members must be private persons, no club or collective stations are granted the membership in A.H.C.

The applicant must be personal holder of at least 25 different Awards or Certificates which have been given him/her for working with other Amateur Radio stations. Certificates given for Contests do not count for A.H.C. Stickers are not counted separately from their master-certificates. The Awards which exist in different "classes" are counted as one and the same Award (e.g. W.A.E., D.U.F., etc.). Club membership certificates count for A.H.C. if they are from clubs for all Radio Amateurs with requirements for their membership (e.g. A1-Operator Club, F.O.C., Tops-CW-Club, R.C.C., etc.). Also certain Awards which are given for excellent Amateur Radio operation, like "The Edison Award" and "Public Service Award", count for A.H.C. However, the A.H.C. Board will consider the validity of the Awards submitted for A.H.C. In case an Award is given exclusively for telegraphy or telephony they are counted separately.

Furthermore, the 25 Awards or Certificates must include at least one from each of four (4) continents. The applicant may choose the continents from which he/she will submit the Awards.

The applicant must have a QSL card of his/her own and it must be submitted along with the application.

There are also "stickers" available for the A.H.C. Certificate:

AHC-50 (First Class Hunter) for 50 Awards.
AHC-100 (Top Class Hunter) for 100 Awards.

How to get in: Send a list of the 25 or more Awards or Certificates you hold to the Hon. Secretary of A.H.C. This list must be countersigned by the representative of your own Radio League, or in case this is not convenient, by some active Radio Amateur who can check the number of your Awards and Certificates. Also please sign the application personally. Do not forget to enclose your own QSL card along with the application.

The fees: The membership fee is one U.S. dollar or equivalent (British, Swedish, West-German or Swiss currency or 12 I.R.C's.). In case the member wants to receive the A.H.C. Circular Letter a subscription fee of one U.S. dollar (or equivalent as above) is charged yearly. Every member will automatically receive the first C/L after becoming member.

The Honorary Secretary of A.H.C. is V. J. Velamo, OH2YV, Isokaari 4-B-30, Lauttasaari, Helsinki, Finland.

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SUCCESSFUL URUNGA CONVENTION

The Ninth Annual Urunga Convention is now an extremely pleasant memory to the 52 who converged on Urunga for Easter week-end. Those who registered were:

VKs 2BZ and family, 2FH and family, 2FP and XYL, 2GV, 2JS, 2PM and family, 2PY, 2RU and XYL, 2SF and family, 2VV and XYL, 2WQ, 2XT, 2ACU, 2ADN and XYL, 2ADT and family, 2AEU and family, 2AHA and family, 2AHH, 2ALJ, 2AOR and family, 2APQ, 2ASZ and XYL, 2AWG, 2ZCK and family, 2ZCQ, 3ALQ, 4FP, 4VS, 4XO. Associate members: Bob Bailey and XYL, Norm Dash, L. Gilbertson, Snow McAuley, Norm Moody and XYL, Fred Reid, Cec. Siebel.

To all these, the organisers would like to say "thank you" for coming and that we hope you enjoyed yourselves and will come again next year.

It was very pleasing to have our State President, 2APQ, and Secretary, 2ALJ, with us, and I know that many questions were answered by Perce and Norm and that all those present now have a better understanding of Institute affairs.

A lot of new faces were present, particularly among the younger members, and many new friendships were commenced. Ian 2ZCK, of Moree, was 21 during the Convention, and news leaked out that Bill 2AWG is going off the deep end in May. Congratulations to you both!

Many tales can be told and situations recounted, but only those present could enjoy to the full the pulsating life of the Convention. To watch Alan 2FH auction a barrowful of disposals gear is first class entertainment, and to listen to the bidders trying to out-fox him is also a performance of high standard.

The 144 Mc. hidden tx hunts called for top class operating skill. The first, hidden by 2AHH, was planted on the edge of a bitumen road, but just like the bees, the hunters went where the scent was strongest and would insist on grading new roads in the scrub and paying the penalty of being bogged. Only two found this tx, whilst the remaining three were separated from it by the Bellinger River.

In the 144 Mc. fox hunt a well known Sydney v.h.f. man assured me that the fox is always caught, but when I left Urunga he was still there trying to puzzle out just where the fox (2AHH) got to!

The position for the second hidden tx hunt was selected by Brian 2ZCQ and Assoc. Fred Reid, who once again superbly camouflaged the tx, so much so that three cars stopped within 100 yards of it to take bearings, and then moved off without seeing it. After a bit of backing, however, two cars succeeded, but the third didn't catch on for another 20 minutes.

I must thank the home stations for their magnificent support of the l.f. contests. Without them our Convention would surely be damped. Conditions were good and despite the fact that 10 portable stations were operating over a very small area, interference with each other was negligible. However, it must have sounded bedlam to listeners and would-be rag-chewers. Some of the operating techniques used were extremely slick but very effective. To stand the service is a compliment to the equipment used and augurs well for W.I.C.E.N. requirements.

The complete list of prize winners is as follows:

No. 1 Fox Hunt: 1st, 4JP, 25 mins.; 2nd, 2XT, 60 mins.

Gerry Challender Memorial 7 Mc. Contest: 1st, 2AHH, 58 pts. (3rd win in succession); 2nd, 2XT, 52 pts.; 3rd, 3ALQ, 48 pts.

144 Fox Hunt: 1st, 4JP, 20 mins.; 2nd, 2ZCQ, 25 mins.

Ladies' 144 Blindfold Hunt: Heat winners: Mrs. Whyte (XYL of 2AHA), Mrs. Hill (XYL 2ADT), and Mrs. Fitton (XYL 2SF).

No. 2 144 Mc. Hunt: 1st, 2PM, 38 mins.; 2nd, 2AHH, 39 mins.; 3rd, 2AHA, 55 mins.

Urunga Scramble: 1st, Tie between 4FP/3ALQ 36 pts.; 3rd, 2AHA, 35 pts. Best miles per watt, 4JP who worked a W7 on 15 mx.

Furtherest distance travelled: 3ALQ.

Ladies' Penny Tossing Competition: Mrs. R. Bailey.

Ladies' Lucky Registration No.: Mrs. Collett (XYL 2RU).

Gents' Lucky Registration No.: 2APQ.

The Convention report would not be complete without thanking the persons who rendered such stirling assistance. Secretary Norm Dash carried on a winning paper war. Alan 2FH really battled to rid himself of a batch of disposals for which Rod 2ACU was good enough to make a special trip to Sydney to obtain, whilst Brian 2ZCQ and Assoc. Fred Reid did a good job with the hidden tx.

Wireless Institute of Aus.
New South Wales Division

A.O.C.P. CLASS

will commence in July

★

The Classes will be held in the

Railway Institute Rooms
Castlereagh Street, Sydney.

★

Full details can be obtained from Secretary W.I.A., Box 1734, G.P.O., Sydney, N.S.W.

The business houses who contributed to our prize list were Australian Electrical Industries, Philips Electrical Industries, Amalgamated Wireless Valve Co., United Radio Distributors, and Associated Newspapers—Radio, T.v. & Hobbies division.

Our usual Saturday night emission testing period was held in the "Do Me" shack of Crieff 2XO, who is at present touring New Zealand, and our thanks go to him for making the shack available.

Ted Harvey, who screened our films on the Sunday night, did an excellent job and presented a really excellent home-made colour film entitled "Early Tomatoes," which covered the tomato growing industry around Coffs Harbour. Congratulations Ted on an excellent production!

It was good to see our regular Interstate friends, 3ALQ, 4FP, 4XO, and 4VS, and we do look forward to seeing them again next year.

There is twelve months available now to get gear ready for Urunga 1959 and if you chat to those who have been before, you will certainly want to set aside Easter 1959 to come to Urunga.

—2AHH, Zone Officer.

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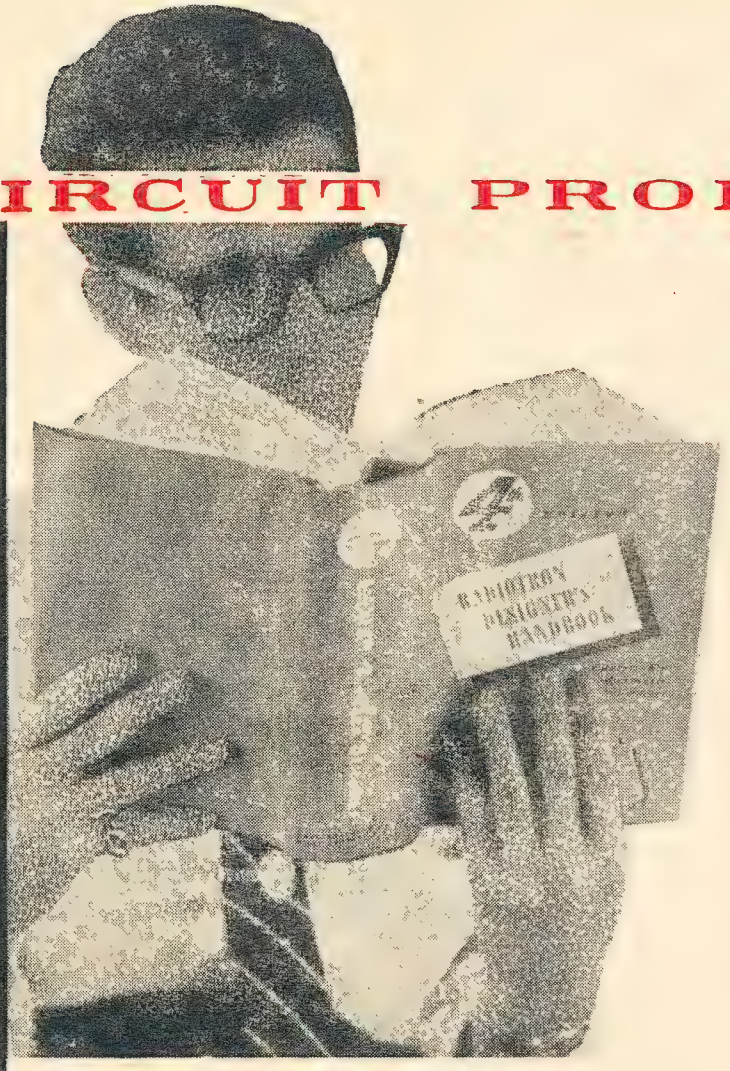

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THE DUTIES AND POWERS OF W.I.A. FEDERAL CONTEST COMMITTEE

One of the integral parts of any society is the organisation of healthy competition between members. In this regard some person or persons must be entrusted with the duties of organising such competition as is necessary to stimulate interest and promote friendly rivalry. Such is the duty of the W.I.A. Federal Contest Committee.

1. The body shall be known as "The Federal Contest Committee of the Wireless Institute of Australia."

2. The objects of this committee shall be to organise such competition in contests as is necessary to stimulate interest and promote friendly rivalry.

3. The Federal Contest Committee shall consists of a Chairman, Secretary/Treasurer, and three (3) other members, all of whom shall be ex-officio members of the Federal Executive.

4. To be eligible for appointment to the Federal Contest Committee every nominee shall be a voting member of his Division.

5. The committee shall be appointed annually by the Federal Executive from nominations received from any Division.

6. Within 28 days of its appointment, the committee shall notify Federal Executive of its officers.

7. The tenure of office shall be for a period of twelve (12) months, but notwithstanding this provision, Federal Executive may, at any time, terminate any or all of these appointments.

8. In the event of a vacancy occurring on the committee, the Division concerned shall within 28 days nominate another member to fill the position.

9. The duties and powers of the Federal Contest Committee in relation to contests conducted by the Federal Council of the Wireless Institute of Australia shall be to:—

(a) Prepare a set of rules for contests which shall apply to all Federal Contests.
(b) Prepare suggestions for improving the rules of contests with the object of making all contests more interesting and equitable to all contestants, and durable in regard to changes of rules. (Opinion of Divisions shall be sought on any proposed amendments which would alter the nature of the contest, awards to be made or method of scoring.)
(c) Arrange publicity of the rules of all Federal Contests, both locally and overseas, as necessary.
(d) Arrange publication of such rules in "Amateur Radio" at least one (1) month (and preferably earlier) before the date of such contests.
(e) Supervise the conduct of contests in relation to the appropriate rules.
(f) Arrange for the collection of all entries to Federal Contests.
(g) Arrange for the checking of all logs or entries.
(h) Arrange for the publication of rules, results and winners of contests including overseas contests.
(i) Arrange for the preparation of certificates and/or awards, and the forwarding of same to the successful participants as soon as practicable after the results of such contests are decided.
(j) Keep a register of all certificates issued and awards made.
(k) Keep an up-to-date record of the rules of all contests.
(l) Carry out the wishes of Federal Council by making such changes to the rules as are initiated by Divisions and approved by Federal Council.
(m) Carry out such Contest Policy Directives as are issued from time to time and/or are contained in the Annexure attached hereto.
(n) Submit Federal Notes for publication in "Amateur Radio" through Federal Executive.

10. The Federal Contest Committee shall at all times communicate with Federal Council through the Federal Executive except that:—

(a) In matters of urgency ONLY, requiring a vote of Federal Council, the Federal Contest Committee may communicate direct with Federal Councillors, with a copy to Federal Executive on such matters, providing that the result of such vote is to be advised to all Federal Councillors within fourteen (14) days.
(b) In matters of extreme urgency where there is insufficient time to comply with the provisions of para. 10 or 10(a), the Federal Contest Committee may apply to the Federal Executive to use its power under the Federal Constitution Section 34.

11. The Federal Contest Committee may if it so desires obtain the assistance of other members of the Institute for checking of logs.

12. The Federal Contest Committee shall deal with matters pertaining to the following Federal Contests, or such other contests as are added from time to time by direction of the Federal Council:—.

(a) VK/ZL DX Contest.
(b) Remembrance Day Contest.
(c) Ross Hull Memorial Contest.
(d) National Field Day Contest.

In relation to the VK/ZL Contest, it shall liaise with the N.Z.A.R.T. who conduct this contest bi-annually with the W.I.A., and ascertain that any changes initiated by either society are expeditiously brought to the notice of the other.

13. The costs of administration of the Federal Contest Committee shall be paid by Federal Executive but no expenditure shall be incurred by the committee without the authority of the Federal Executive.

14. A statement of such expenditure shall be rendered to the Federal Executive for inclusion in the Federal Balance Sheet at a date to be specified by Federal Executive.

15. The Federal Contest Committee shall submit to Federal Executive a report of activities for consideration at the Federal Convention, or inclusion in a Federal Executive Report. (This report shall be available fourteen (14) days prior to the date of the Convention.)

16. Upon termination of tenure of office of the Federal Contest Committee, all records shall be completed and returned within twenty-eight days (28) to the Federal Executive.

17. Finally, the Federal Contest Committee is at all times to consider itself as operating under Federal Council through their agency the Federal Executive.

ANNEXURE OF CONTEST POLICY DIRECTIVES OF FEDERAL COUNCIL

Details of Contests shall be referred to the Federal Council for comment before promulgation. (C04)

All contests of a Federal nature are conducted by Federal Executive under direction of Federal Council, who reserve the power to approve or otherwise of any Division conducting special contests. (C05)

Draft proposals for any changes in rules of Australian contests are circulated to all Divisions at least three months before the contest. (C11)

The Northern Territory is classed as a separate area for contest purposes in Australia. (C19)

The use of the W.I.A. Standard Log Sheet is recommended for use by all contest participants. (C28)

In future N.F.D. Contests fullest publicity be given by all Divisions in every way possible for at least three months prior to the contest; and further that Divisions organise State teams to ensure active participation by all States. (C13)

Federal Council consider it of the utmost necessity to expand interest in the N.F.D. Contest in view of the future requirements of Civil Defence. (C24)

The standard numbering system recommended and agreed to by a majority vote of the I.A.R.U. Societies will be used by the W.I.A. (C27)

A standard set of rules as submitted in 1950 be adopted for VK/ZL Contests. (C09)

Draft proposals for any change in the standard rules of the VK-ZL Contest be circulated to all Divisions at least five months before the Contest. (C10)

An open award considered higher than the existing award be made for future VK/ZL Contests to be determined from the sum of the final points of a competitor's entry for both phone and c.w. sections. (C32)

The Federal Contest Committee investigate carefully the rules of all Australian Contests with a view to maintaining uniformity for at least two years. (1952/4.8)

The Ross Hull Memorial Contest be extended to include all v.h.f. bands as soon as possible. (1952/2.2)

The Federal Contest Committee to frame a fresh set of rules for the Remembrance Day Contest so that the larger States, VK2 and VK3, may in future have a more reasonable chance of winning the contest. (Note: This motion rescinded Fed. Con. 1953/2.2. Replaced by motion 2.3.1.1953)

That consideration be given to finding a more suitable day for the National Field Day. (1953/2.4)

Federal Executive be instructed to peruse Overseas and Local Calendars to determine a clear week-end at the end of February or beginning of March in each year. (1953/2.4.1) (Ref. 1953/2.4 above.)

— . . . —

BOOK REVIEW

INDUSTRIAL RECTIFYING TUBES

By Members of Philips Electron Tube Division

In this book details are given on all aspects of rectifier tube design and application.

In particular, reference is made to their use in battery chargers, cinema arc-lights and industrial welders. All types detailed are of the gas-filled variety. Data is given on 18 tube types, as well as details of their use in their various applications.

This book will be of particular interest to those associated with the design of low voltage, high current power supplies.

Our copy from Messrs. Philips Electrical Industries Pty. Ltd., Philips House, 69-73 Clarence Street, Sydney. Price in Australia, 18/-.

ANALYSIS OF BISTABLE MULTIVIBRATOR OPERATION

The Eccles-Jordon Flip-Flop Circuit, by P. A. Neeteson. From the Philips Technical Library.

This bistable multivibrator was first conceived by Eccles and Jordon in 1919, but has only been applied over the last few years to the important role in electronic pulse apparatus such as counting machines.

In this book a thorough analysis of the dynamic behaviour of the bistable multivibrator is given. Circuit design is fully covered, taking into account the influence of tube characteristics.

Chapters include discussions on the dynamic condition, the complete trigger cycle, variations of the fundamental circuit and way of triggering, as well as a survey of literature on the subject.

This book will be of intense interest to all associated with electronic design in the computer field.

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PREVENTION OF INTERFERENCE BY TELEVISION RECEIVERS

A television receiver is capable of producing interference with broadcast reception over a limited area. This interference is due in the main to induced electric fields and magnetic fields set up in the neighbourhood of the television receiver; re-radiation of parasitic oscillations from the receiver proper is less serious and will not be considered here. The electric field is the more troublesome since it will affect broadcast receivers having ordinary aerials; the magnetic field will influence only that minority of receivers having frame aerials.

The most important sources of interfering electric fields are the line output transformer and associated high potential points; the deflector coils; and high impedance circuits near these components. Since, in general, magnetic fields emanate from the same sources, the measures recommended below will reduce both causes of interference.

(1) The e.h.t. transformer, booster diode and line output valve should be totally screened by a can which makes good contact with the chassis. Two-hole fixing of the can is not entirely satisfactory and it is advisable to make multiple connections between can and chassis. The difference in radiation between a good and a bad connection here may amount to as much as 8 db. for magnetic fields.

(2) Any width or linearity controls of the inductor type should be screened separately if they cannot be accommodated inside the line output screening can.

The design of the line output screening involves problems of ventilation to avoid overheating of the components enclosed by the screen. As a general guide to designers, the maximum safe bulb temperature for the PL81 line output pentode has been determined at 185°C. (design centre rating).

(3) The deflector coils should be screened as far as possible by an aluminium can or by metal foil wound coaxially around the coil and earthed to chassis. Care must be taken to ensure that there is no likelihood of voltage breakdown between the foil and the coils. This form of screening will give good reduction of electric fields and will also reduce magnetic fields but not to the same degree.

To reduce the magnetic field still further, the deflector coil screening can should have endplates with holes only just large enough for the tube neck to pass through. This gives a further reduction of approximately 6 db.

(4) Care should be taken in the layout of the receiver to keep circuits of high impedance well away from the worst sources of interference.

(5) The graphite coating of the cathode ray tube should be efficiently connected to earth—preferably from two separate points on the coating.

(6) Both conductors of the mains supply should be connected to the earth terminal via 0.05 μF. paper capacitors rated for 600 v. r.m.s. working.

(7) The use of a perforated foil screen at the back of the set will reduce radiation in that direction.

[Reprinted from "Mullard Valve Notes No. 1, published by Mullard Ltd., Technical Publications Department, Century House, Shaftesbury Avenue, London, W.C.2.]

AMATEUR TELEVISION

(Continued from Page 9)

zero and adjust **Setup** preset to give about 5% of pedestal. Turn up the **Sync.** control to see that the sync. level can be varied from zero to about 50% maximum. Adjust to 0.4 volts. Check that raising the pedestal causes the picture monitor retrace lines to disappear.

Advance the **Video Level** control to give 1 volt of picture information. With a calibrated c.r.o., check output voltage across the 75 ohm termination, adjust sync. to 0.4 volt, video to 1.0 volt, then calibrate waveform monitor to agree using the **Cal Video** preset and **V. Shift** to bring the black level to the 0 volt on the graticule. Then sync. tips should reach —40 and video +100. Once calibrated, the waveform monitor is your guide for all future tests and should not be touched.

The **White Clipper** preset is next adjusted to clip at the +1.0 volt level (12½% mod.) and it should not be possible to force video peaks beyond this level. The **Set Gamma** control can only be adjusted with a grey scale test chart before the camera. This will be discussed later in this series.

Similarly the peaking capacitor in the feedback output stage is adjusted for minimum ringing on a sharp edge, just as the overshoot, as seen on a c.r.o., changes from one polarity to the other. No discussion of the picture monitor seems necessary, as it conforms very closely to receiver circuitry and techniques. The focus stabiliser is not essential but very useful, although permanent magnet focussing should be ideal.

Substitute Tubes

Once again these tubes were used because I had them. The 6SN7s can be replaced by almost any of the double triodes, as long as current handling ability is assessed, when replacement is considered. In the video amplifier, 6SH7s throughout would be ideal and 6AL5s would be better than the 6H6s. The VCR139A could be replaced by the 3KP1, 3BP1 or VCR138, although physical size should be considered.

Critical Components

Match the pairs of resistors in the clamp keyer and the resistors in the regulators (V7), and clipper (V6) are fairly critical and should be checked by experiment. As long as the **White Clipper** control has a range of threshold from 0.7 volt of video to well off waveform monitor screen—say 1.5 volts—it will be satisfactory. The components in the network of the clamp V19 are also fairly critical to allow **clamping** in register with the graticule.

Next month I will discuss power supplies for television transmission and details of that for the camera and c.c.u.

B.B.C. Director-General Congratulates American Amateur

The operation of Radio Hams—or Amateurs—exchanging signals and conversations from continent to continent, are normally of little interest to the non-technical public, who look to radio for news and entertainment. But in January an enterprising American Ham—17-year-old schoolboy Jules Madey, of Clark, New Jersey—made an exciting contribution to B.B.C. programmes, which brought him a cabled message of congratulations and thanks from the Director-General of the B.B.C. Sir Ian Jacob. It was Jules' initiative which early on the morning of January 24 made possible a direct radio and telephone hook-up for which British Post Office and B.B.C. engineers had been hoping for weeks between Dr. Vivian Fuchs, then at the South Pole, and B.B.C. reporter, Donald Milner, in London. As a result their conversation —just before Fuchs left the Pole—was heard clearly by listeners to B.B.C. Home and Overseas News programmes throughout the day.

For a year or so contact has been made from time to time between the American scientific station at the Pole and Radio Amateurs in the United States. The most successful of these had been 17-year-old Jules, who operates in New Jersey. He has been able to put members of the American party at the Pole in touch with their families by "plugging them in" to the ordinary telephone system. Donald Milner had asked him to let him know if there was ever a chance of extending his service to him in London.

But radio conditions in Antarctica are the worst in the world, and apart from this the transmitter at the Pole had been out of action for nearly a month. When reports came in that Dr. Fuchs had left the Pole, there seemed to be no further hope. But the reports were premature. The same night Jules Madey was attending a school reunion in Clark, New Jersey. He came back to find a friend who was manning his set just fixing up a telephone link between Mr. Mogensen, the American scientific leader at the Pole station, and his wife. As Madey came in, Mogensen said that he must leave his set for the moment to go and see Dr. Fuchs off. Realising that Fuchs was still at the Pole, Madey asked Mogensen if he would ask him to come back and have a word with Milner in London.

Meanwhile, Madey put through a personal call to Milner's flat by trans-Atlantic telephone, and so at a quarter-past-four in the morning Milner was awakened by the phone ringing and Madey saying that Dr. Fuchs was waiting to speak to him. Then the familiar voice came through to London from the bottom of the world.

A live conversation by trans-Atlantic telephone between Jules Madey and Donald Milner was broadcast the following day in a B.B.C. programme for listeners in Britain.

—B.B.C. Press Release.

S W L

Ian J. Hunt, WIA-L3007
211 St. George Road,
Northcote, N.16, Vic.

As a beginning to these notes I would like to point out the reason why some letters received by me are not mentioned in these notes until about two months have elapsed from the time I receive them. The reason is that I am supposed to submit the notes on or before the 8th of the month preceding the month for which the notes are to be published. As a result, for the May issue of the magazine I must have the notes in to the Editor by the 8th April. Well, in this case, as Easter has intervened I have held back my effort until the 9th. I therefore appeal to all those who may write to me not to wait for the latest issue to come out to see if your previous correspondence was included (if you sent it in time it will be anyway), but to make sure that I receive your contribution well before the beginning of the month. Please wake up to this fact fellows. Please write to me to provide dope for this column.

My reference to Eric Trebilcock last month brought forth a letter from that worthy gentleman, who has by the way just returned to VK3 after a short bout of duty in VK5, some of which may prove of interest to those (if any) who read these notes. Eric states that he will not be entering our current contests advertised last month, so many of you can therefore breathe a sigh of deep relief. The contests of VK origin which mainly interest him happen to be the VK-ZL Contest and the R.D. Contest. Eric mentions quite casually that the following statistics may indicate something of his listening efforts. Last year he received 647 QSL cards from 127 countries, representing 38 zones. So far this year he has on hand confirmations from 186 stations, representing 62 countries and 26 zones. His post-war total is (and I pause for a deep breath), 4,501 QSL cards received, giving him 239 countries confirmed with 40 zones represented. Phewwww. So there you are chaps. It just goes to show what you can do if you really try. All the above figures, by the way, are applicable only to reception of Amateur stations. Keep it going Treb., some of us might catch up to you sometime within the next hundred years.

A letter from Dave Jenkins, WIA-L3039, of Orbost, informs us that he is still alive and listening. Between his periods of milking the cows he has heard on 14 Mc. recently KP4, OH1, FK8, ZM6, K6, A5BDE, UA0, DU9, VE3, UC2 and OH2. Dave has been suffering battery trouble as when his dry batteries get a bit low they can't push out enough herbs to run all stages of his rx. Apparently towards the end of the month things generally get down to looking like a detector and one audio stage. However, Dave says that the good old faithful t.r.f. seems to work provided he does not bump the table and show up those few loose connections. He has some secret up his sleeve concerning a new super duper rx but says he won't reveal the details until he has it working.

VK2 S.W.L. GROUP

This is just the news that I feel many of those younger, and perhaps older, readers in VK2 have been waiting for.

For the purpose of instituting an S.w.l. Group in N.S.W. a meeting was to be held at the T.v. Studio of the School of Electronics and Communications, Gore Hill Technical College, on Monday, 14th April. As yet we have no news of the results of this meeting, but it is to be hoped that all the VK2ites rallied round and provided a good turn up. A copy of a circular kindly forwarded by Mr. N. G. Beard, 2ALJ, Secretary of the VK2 Division, indicates that formation of the Group will run along the following general lines:

An S.w.l. Group member will enrol as an associate member of the Division at an annual fee of 25/-. A financial member of the W.I.A. at the present time may become an s.w.l. merely by registering and obtaining an L-number.

As an associate member, he is then entitled to receive a monthly Bulletin and a copy of the Institute magazine, "Amateur Radio." He may attend all normal W.I.A. meetings and activities as an associate, but may not vote.

He may apply for and receive items of disposals equipment with other W.I.A. members as outlined in the Bulletin, and he may obtain and wear the W.I.A. Lapel Badge.

So there you are VK2 s.w.l's. At this stage the success of this newly formed Group rests in your hands. I hope you will respond to the opportunity provided by your Division and make a really good show of things. If any of you are interested in this Group drop a line to the Secretary, Wireless Institute of Australia, New South Wales Division, P.O. Box 1734, G.P.O. Sydney.

We sure hope to hear a great deal of the s.w.l. activities in VK2 from now on.

VK3 S.W.L. GROUP

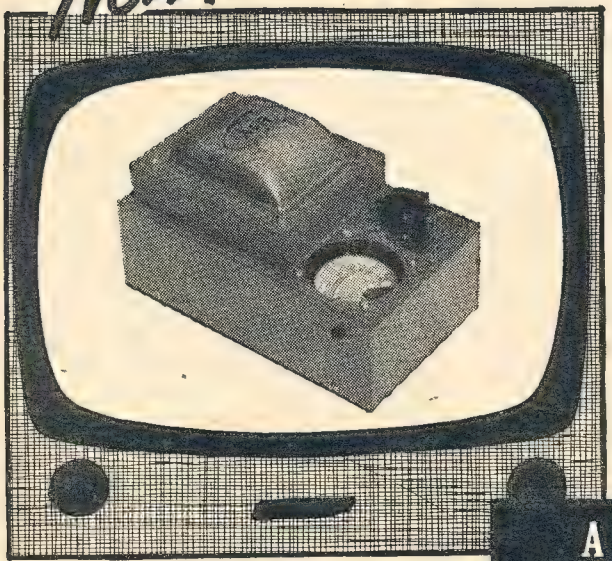
At the March meeting of the Group we really enjoyed ourselves. The meeting took the form of a Question Night, the questions ranging from relatively hard ones for members of the Group who are known to be engaged in study for the A.O.C.P. examinations, to tricky ones for the unwary. Several members were handed a sealed envelope a few minutes before they were required to speak and were requested to answer the question contained in the envelope. After the answer was given to the best of the ability of the person concerned, the meeting was free to question him further. Great fun was had by all and I think everybody learned a little more about Radio.

As Easter has intervened this month, there has been little or no contact between myself and other Group members. However, I have been able to glean the following information about members. Bert Stebbings has just arrived home from a visit to Deniliquin, having had several adventures on the road going there and back, I presume he was visiting Noel, ex-3ANS, now 2OU, who was previously one of the Group representatives with the VK3 Council. We wish Noel all the best in his new surroundings. Maurice Cox is believed to have visited VK5 during the Easter period, but we have no further news of his doings. Our President, Len Poynter, now has his 6 mx gear performing well and has been busily sorting out the JA stations on that band. We wish him luck in his DXing on the v.h.f. bands.

The Group wishes to pass sincere congratulations to our recent host and hostess, Ron and

(Continued on Page 20)

New! A & R T.V. Voltage Adjuster



An Essential Instrument for the T.V. Serviceman

With the increasing number of Television Receivers now being installed, the demands made upon the T.V. serviceman's time will increase steadily.
In certain areas reception difficulties often occur due to low supply voltage, and it is certain that some ready means of detecting this condition would assist the serviceman, and perhaps save valuable time in endeavouring to locate a suspected fault within the receiver. With the above in mind, A & R have available the T.V. Voltage Adjuster as illustrated. Soundly constructed and finished in attractive Silver-Grey Hammertone, this A & R product provides the serviceman with an invaluable, yet inexpensive addition to his test equipment.

An Aid to T.V. Installation and Service

Flicker or shrinkage of the Television picture often indicates a low line voltage, leading to complaints of unsatisfactory reception, or to difficulty in adjusting the receiver controls. This condition can be reproduced with an A & R Voltage Adjuster, thus indicating the lowest possible mains voltage for good reception. The mains taps on the Receiver can sometimes be adjusted to suit, provided the voltage is consistently low.
There are many other applications for the A & R Voltage Adjuster, such as, correction of input voltage to Amateur Transmitting and Receiving Equipment, Tape Recorders, Hi-Fi Audio Equipment, etc., provided that load imposed is within capacity of adjuster. The auto model is quite suitable for these applications.

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Servicemen will find the double wound model an invaluable aid when servicing transformerless T.V. Receivers. The Receiver under test can be safely isolated from the mains supply, thus affording maximum safety and a safeguard against possible damage to valuable test equipment. A separate earth terminal is provided for earthing the receiver chassis to the adjuster if desired.

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Victoria: Homecrafts P/L., J. H. Magrath & Co. P/L., Radio Parts P/L., Warburton Franki, Motor Spares Ltd. **South Aust.**: Gerard & Goodman Ltd., 196 Rundle St., Adelaide. **Qld.**: A. E. Harrold, 123 Charlotte St., Brisbane; Messrs. Chandlers P/L., Cr. Albert and Charlotte Sts., Brisbane. **West. Aust.**: A. J. Wyle P/L., 1064 Hay St., Perth. **Tas.**: Homecrafts P/L., 220 Elizabeth St., Hobart. **N.S.W.**: United Radio Distributors P/L., 175 Phillip St., Homecrafts P/L., 100 Clarence St., Sydney.

D X

Frank T. Hine, VK2QL
30 Abbotsford Road,
Homebush, N.S.W.

The "big" DX news for the month is 50 !Mc., although the "DC" band boys may not agree. Without meaning it in any derogatory form, I never expected to receive a comment such as I received from **4HD** this month for his 50 Mc. doings: "The usual hordes of JA stations JA1-JA0 heard and worked—no further comment." See the 50 Mc. activity list and you will see the reason. Contact was made between ZL and XE1GE on 20 Mar. One JA is reported to have worked seven LU, two CX and one PY. ZE2JE is on the lookout for VK no news of contacts in other VK areas. **4XJ** has four countries to his list, similar to 4HD. **4LK, 4WD** and **4NG** have been amongst the DX and **4ZP** is reported to have heard VK0. **K6RNQ** has worked all ZL call areas. If you have no b.f.o. on your receiver or can't key your transmitter, best you have a look at it if you are interested in 50 Mc. DX as quite a number of the QSOs have been on c.w.

NEWS AND NOTES

VK0TR has been giving his QTH as Heard Is. As there is no current "occupation" of Heard Island, you need not expect a QSL from him (2EG).

2ACX has received a QSL from **FW8AA** for a QSO he never made although he tried hard enough, so if you try hard enough auto suggestion must work. I believe that a number of FW8AA QSLs are not acceptable for DXCC credit due to insufficient detail.

PY4ZG is not just another PY. He is located in the Brazilian Antarctic region, so maybe handy for the future to have in the bag.

VR3K is another active station from the Pacific Xmas Is.

KC4AF has been active from **Navassa Is.** for the last few days in March. This DXpedition had its share of troubles. QSLs are to go via W8TJM. It was planned to operate from **XE4,** but the required permission was not forthcoming. This is becoming a problem to many DXpeditions proposed by U.S. Amateurs. It is not possible for a "foreign Amateur" to obtain authority to operate in the U.S.A. and it seems there is some "reciprocation" taking place at present, ZD8 and PY0 being currently in the news.

VS5JL is active on 14 and 21 Mc. phone, but leaves in May (2JZ).

The new country situation is being further confused by **YK1AT** (United Arab States), the current theory being that he will be given additional classification to the one he previously held. When is some sensible reasoning going to come out of all this. One answer could be to give a method of identification to all geographical areas and irrespective of what political developments take place in that country, the identification remains. I know there is much more to it than that, but it could be developed. It would not clash with W.A.Z.

PX1FC starts operating in ANDORRA in July, operators being F8FC and ON4AU. Operation will be for the first two weeks (3XB).

Another for the YL fans is **3A2BF** on 14 Mc. phone almost daily (5RK).

The first of **JT1AA** QSL's has started to reach the VK bureaux. Not many to date, but 1,000 had been despatched by the end of Nov. Early in the year he was reported to have made 2,500 contacts. What a job OK1JX has in front of him when you consider he is handling QSLs for JT1AA and JT1YL.

ZD3G is on 14 Mc. c.w. and is ex-VS9AG and ST2NG.

ZD7SA is active on 28 Mc. c.w. and have heard the Ws after him round 2200z, but have not been able to hear him here to date.

Mystery man, **Danny Weil,** is causing some comment due to varying "stories". One is that he has boat trouble again, another financial troubles, and a third he is on his way.

If you have attempted to work or contacted **JT1AA** on phone, there is very little hope of confirmation unless it is phone both ways. 2EG tells me that if you ask him to listen for your phone in a c.w. contact, all you will get is a **listener's report,** not a 2-way confirmation.

I have received two copies of the DX bulletin which W4KVX prepares and issues and it is quite an interesting piece of work. The back page is called "the drooling corner" and a very rare QSL is reproduced for all and sundry to drool over, one being 4W1MY. Extracts of DX news are **HA5AM/ZA** may be active again in April/May but there is doubt about his QSLs being accepted due to his operations being reported made as Air Mobile. **VQ8AQ** is another station active from Rodriguez Is. **FY7YH** is active on 14 and 21 Mc. round 0400z. **W8FGX** has a 2 el. beam rotating on 7 Mc. and reports that band has similar characteristics to 14 Mc. when beamed. **HN** is probably a new prefix to be heard soon and is substituting the old YI. Ex-YI2AM is expected to be on with it soon. **OR4VN** is the call sign of the Belgian Antarctic Expedition. **Fernando de Noronha** is expected to be kept going by PY7LR and PY7SC who are now stationed on the Island. **VP0RT** operated by FS7RT is a legitimate call sign for the newly founded "Federation of the West Indies" which includes VP2, VP4, VP5, and VP8 (more country troubles). My thanks to W4KVX.

W6YY has also dropped me a line containing LA2JE/P is still active from Spitzbergen. **VQ4AQ** and **VQ4KRL** are planning a DX-pedition to VQ1 and VQ9. **ZD2CKH** is on 14 Mc. c.w. **DL8** is the new prefix for the Saar, old **9S4.**

"COUNTRY CLASSIFICATION"

For those who are interested in the current question of "country classifications", give this some thought. For certain purposes, some organisations break the world into grids or squares using the Lat. and Long. as the boundary. This principle has much to commend it for Amateur Radio. If the world, for our purposes, we divide into grids or squares of 20 degrees each side, up to 80 degs. Lat., we have 144 areas. If 10 degs. Lat. and 20 degs. Long. we have, 288 areas, and 10 degs. square 576 areas. Political events would then have no effect on this whatever, and Amateur Radio is reputed to be non-political. A QSO would then only need to include the area of contact along with report and QTH.

ACTIVITIES

Pride of place rightly goes to the 50 Mc. boys this time. Only wish I had fuller information. You will notice that some of the W contacts were made when 28 Mc. is open.

50 Mc.: 4HD c.w.: W6PUZ* 2240z, W6TMI*, W6AJF*, W6AM*; phone K6TRR*, K6PXT*, W6BAZ*, K6ERG* 0500z, ZL2DS* 2150z, KX6AF* 2136z, KH6s PP*, NS*, CCZ*, AR*, CNI* 09-1120z. **4XJ:** KX6AF*, ZL2DS*, K6EDX*, W6BJI*, K6RNQ*, W6BAZ* all on c.w., and phone W6EDX*, W6BJI*, JA*. Band been open JA every day.

28 Mc.: 2QL: SM*, ZS6KD*, GM*, JA*, PJ2AE*, K4AQL/KG6*, W*, VE*, KL7, KX6, UA0KJG, CR6CS, ZS3DP, VU2AC, DJ, ZC5AL, KH6, KC4AF. **4HD:** CX1OR*, UA9MI*, HB-9JW*, CT1PK* long path, PY5EG*, ZS6SA*, VS5JL*, HC1FS*, LU3TB*, HC1GE*, BV1TC*, OZ*, G*, W*, VE*, DL*. **4XJ:** CN8IB*, 4X4IX*. **5WP:** SM5CO*. **Rod de Balfour:** CT1SX, ZS-6OU, ZS2DR, ZS1BZ, ZE6JJ, CN8GF, DU1CV, 4S7YL, CR7BB, VU2RM, VU2BK, VS2DQ, CT1SX.

21 Mc. c.w.: 2AMB: CX5CR. **2QL:** PY4OD*, PY2AJK*, ZB2I*, CN8FM*, CO2SM*, UB5DW*, VR2DA*, EA5BA*, JT1YL*, KC4AF*, TI2LA*, JA*, Europe*. **2JZ:** OH*, UA2*, UA3*, G*, JA*, ON*, SP*. **7LZ:** UQ2AN*, GW*, LA*, KA*.

21 Mc. phone: 2JZ: CN8WX*, F*, HC1EB*, YS1O*, KA*, I1CVS*, ON*, VS5JL*, DJ*, G*. **5WP:** VS2*, VS5*, OK*, HB*. **Rod de Balfour:** PA, G, GD, GM, GC6FQ, F, 4S7YL, VU2BK, VR2DA, OA1IGY, CX2AX, PY2APE, ZS5NZ, ZS6BW, CR4AU, HR3HH, VP2DC, VP5DM, CE-2HR, KZ5JJ, KB6BF, HC1FG, ZK1BS, FK8AU. **7LZ:** DL*, FK8AU*, VP2DC*, G*.

14 Mc. c.w.: 2ACX: KC4AF*, HA5AM/ZA*. **2AGH:** HE9LAC*, FK8AT*, UA0KKD*, 4X4IM*, VK9JF*, CT2AI*, KC4AF*, FR7ZC*, VQ3CF*, LA6CF*, OX3UD*, ZD3G. **2AMB:** CN8IS*, PY2BAU*, HK5CR*, VU2KM*, KC4AF*, CM-6IS*, 4S7FM, CR6AP, KW6CW, FB8YY, FB8XX, KM6EV, VK9JF, VQ8AM, FY7YF, KP6AL, VR3K, FF8AJ, ZS8R. **2OW:** UP2KCB*, UA0*, HA*, YV5BX*, UB5*, VP5BL*, PY4ZG*, JZ-0HA. **2JZ:** UA0*, MP4BBC*. **2QL:** UP2KCB*, UO5WP*, CT2AI*, JZ0HA*, OX3DL*, KC4AF*, GC2CNC*, UF6FB*, JT1AA*, ZE5JU*, FQ8AJ, VR3K, UG6AB, FR7ZC. **2ZR:** A big list of the regular Europeans and EA*, CT2AI*, CN8BQ*, FA8TT*, HA*, LA*, 4X4II*, ZC4PR*, 4S7WB*, YO*, UB5ND*. **3CX:** ZL5AE*, HZ1AB*, ZC-3AC*, CT2AI*, YV5GO*, YK1AT*, VR3A*. **3XB:** XW8AI*, CO8DL*, CT1JS*, PY2AVY*, CX5CO*, FB8XX*, VP6LN*, CO2*, UB5KAF*, CT2AI*. **4DO:** ZC4BL*, EA1BC*, HZ1AB*, VU2JA*, LZ1KPC*, PY4AO*, VQ2EW*, XW-8AI*, FB8YY, FQ8AJ, VQ3CF, UQ2AB, VQ4EO/FQ8, VP6PJ, UP2KCB, EI4A, ZD6DT, FM7WT, CT3AB, UC2AF, EA6AM, VQ6AB, ZL5AE. **5RK:** UA0KKB*, W*. **WIA-L3039:** UA0, VE3, UC2AA, OH, DU9JO, EA5BD (that's your A5BDE I think Dave). **Don Grantley:** the pickings being BV1US, CN8AS, CN8DJ, CN-8ME, CT2AI, DU3DO, FO8AC, FB8XX, KP4CC, KX6BP, UF6FB, XW8AI, YV5AB, ZM6AS, 4X4FW, 4X4WF.

14 Mc. phone: 2AMB: LU6BBA*, VR4JB*, CE3DY*, TG7SJ*, XE1RM*, CX9CO, CX1AK, LA3G, CM9AA, HK4KW, VR3O, VR3P, ZS-6QW, CE3MG, ZE1JE. **2JZ:** KA7CS*, UA0*, VS5JL*. **3AOM:** CT1FY*, FU8AD*, FK8AS*, HK3CZ*, HK3TZ*, VR3A*, VR3P*, VR3R*, XE1SN*, XE2FC*, HH1HB*, OA4FA*, VP5RS*. **4DO:** VK9AD*, VK0KT*, LU8DF*, HK7LX, HK4HW, VK0TC, LU2HAE, PY2CK, LU4DMS. **5GM:** ZD6DT*, ZE7JR*, EA3LO*, KX6CG*, plus Europeans. **5WP:** VP2KM*, UO5AM*, SV1AE*, DU9AL*, HK7LX*, CT1FY*, EA2DO*, CO8LL*, PY1NC*, LU2DMT*, 4X4II*, TI2AZ*, HC1ME*. **Rod de Balfour:** the pickings being SV0WQ, 5A5TX, 5A2TZ, CN8s, HZ1KN, ET2US, 4X4DK, 4S7YL, AP2U, OX3CY, KA0IJ, VR3P, CX9CO, VP2DC, XE2DO, HC1PG. **B. Smythe:** VR3P, YV5AD, PY2CK, HK4LW, HK7LX, LU7APX, TI2AZ, VR4JB, CE3DY, DL4DU, EA1CD, HC-4IM. **WIA-L3040:** XE2DO, CX2AX, VR4JB, OA1A, PY1CK, HL2AM, EL1H, FB8BC, and on **s.s.b.** I1LOV, DL4ABC, EA2CA, HL9KP (QTH is in Korea, John).

7 Mc. c.w.: 2AMB: VR2DA*, ZS5RM*, ZS-6EU, VS2DF, HB9HY, UB5KAD. **2QL:** ZK1BS*.

7 Mc. phone: 5GM: JA1BAX*, JA9ED*, JA-1MQ*. **Rod de Balfour:** W, KH6. **WIA-L3039:** KL7FBA, W, JA, KH6, KR6. **3AOM:** JA-1BAX*, JA2PY*, JA4DW*.

3.5 Mc.: 2QL: ZK1BS*, ZL1ABZ.

QSL NEWS

Some good QSLs have been received as follows: **2ACX:** VP8BK (S. Georgia), ZC3AC, CR8AC, VQ8AS, VR6TC, JT1AA, HV1CN, ZL-1ABZ. **2AGH:** I1BLF/T, ZC3AC, FA9IH, VK-9JF, FW8AA, HS1C, VR6TC. **2AMB:** CX9CO. **2OW:** PZ1AH, HS1C, VS4BA. **2QL:** SV0WR, VK9JF, ZE1JV (7 Mc.), HS1C, ZC5RF, FB8ZZ, UI8KAE. **3CX:** ZL1ABZ, VP2LU, VP5BL. **3AOM:** XE1SH, TI2CAH, 3V8BX, FU8AD, FA-8CF, OA4FA, VR3A, VR3C. **5WP:** VP2KM. **7LZ:** ZC3AC, FP8AP, UR2KAC, UJ8KAA, JT1AA, MP4BCC, VS9AJ. **WIA-L3030:** VU2CQ, DU7SV, DU9AL, KP4GN.

Well that about winds it up once more and my thanks this time to 2ACX who has the fine score of 264/259; **2AGH** whose last four log entries were new countries; **2AMB** finds his shift work good and bad from DX angle; **2JZ** hoping to get amongst the good ones; **2ZR** who certainly can get amongst it; **3CX** happy with his Kermadec QSL; **3AOM** of whom I have very little info; **3XB** who returns to the page, keep it up Ivor; **4DO** who had no comment; **4HD** and **4XJ** who we offer congratulations on their 50 Mc. work and wish them all the chance of a 50 Mc. W.A.C. **5RK** for his QSP of **5GM** and **5WP; Rod de Balfour** is very happy with his quad. antenna; **WIA-L3039** who has hopes and ideas for a new receiver; **B. Smythe** who hopes to improve his reception with a higher antenna; **Don Grantley** also looking for better things from a new receiver; **WIA-L3040,** who hopes to be able to do more frequent listening. Finally I must not forget my overseas contributors in W4KVX and W6YY. 73 and good hunting.

QTH OF INTEREST

VQ3CF—Box 144, Mwanza (2AGH).
VS5JL—C/o. B.S.P. Co. Ltd., Seria, Brunei (2JZ).
FQ8AJ—Box 80, Bangui.
CT2AI—Box 29, Ponta Delgada, Azores.
FB8YY—Adelie Land base station, Antarctica (4DO).
FQ8HG—Box 891, Brazzaville (W4KVX).
F.E.A.R.L.—Box 111, A.P.O. 994, S. Frisco.
OY7ML—Box 184, Torshavn (W4KVX).
FY7YH—Box 286, Cayenne (W4KVX).
4X4WF—Box 20, Tiberias (Don Grantley).

CHANGE OF ADDRESS

W.I.A. members are requested to promptly notify any change of address to their Divisional Secretary, not direct to "Amateur Radio."

* Call signs and prefixes worked.
z—zero time—G.M.T.

S.W.L. NOTES

(Continued from Page 18)

Lynette Fisher, Mr. and Mrs. 3OM on the arrival of their first harmonic—a bouncing baby boy. We hope much joy will be theirs.

A recent visitor to Melbourne was Ken Robertson, of Port Albert, who in his travels was looking for some s.w.l. gear suitable for mobile operation. Ken said he would be down again in the near future, so we'll be very pleased to see him. Another person expected to visit Melbourne within the next few days is Arthur 3AUL, who afforded the lads who visited the station of 3OM a very nice contact during the course of the evening. We hope he enjoys his visit to the big smoke also.

Yours truly has now erected a W8JK beam for 21 Mc. and is very pleased with it as it has improved reception on that band by at least 3-4 S points. The beam is rotary and about 30 ft. high.

NEW FEATURE

Some time ago I began a section in these notes entitled S.w.l. of the Month. This took the form of details of any s.w.l. who would like to provide them, such as other activities, hobbies, etc., details of equipment used, age, employment and any special achievements worthy of mention. However, this feature fell through due to lack of support. I am willing to include this feature again if you are interested; so if you are, what about providing some information about yourself, whoever you may be?

I have been thinking about starting a "Help Wanted" section, similar to that in the American magazine "CQ". If you require help in your activities let me know and I will publish your name, address and telephone number in these notes in the hope that someone may contact you with an offer of assistance. Don't forget to let me know what type of assistance you need though.

Well that pretty well winds it up for this month. Here's hoping for plenty of news in the future and an increased interest in this column. Now back to that rx to see if I can catch up with Eric Treb.

THE NEW ISSUE OF THE CALL BOOK WILL BE AVAILABLE IN JUNE—WATCH FOR IT!

HAM CHATTER

The occasion was a meeting of the School Parents and Friends' Association. It was being held in the evening, at the home of the President, in the hope of attracting a few fathers as well as the faithful mothers.

Alas—only two fathers braved the occasion (one the President's husband), and both were Hams!

The meeting dragged on, wandering off along too many cross-trails of thought and masculine interest lagged. Soon a murmur of deep voices was heard, rising gradually but steadily to a level at which all could distinguish the rapt if cryptic discussion of "condensers" and "impedance" and "Q" and "S.W.R."

Is there anything as bad as a Ham for complete single-minded absorption in a topic? It's the same at a social gathering; be there more than one Ham present, in no time they are huddled in a corner, oblivious of their surroundings and solemnly intoning their cabalistic litany.

—Extract from Sydney "Bulletin."

ANOTHER W.I.A. PUBLICATION

STATION LOG BOOK

Size: 10" x 8". 96 pages, 48 pages ruled as below, 48 plain.

AMATEUR RADIO STATION LOG

PLATE INPUT TO FINAL STAGE .... ANTENNA ....

QSO NO	DATE TIME	FREQ & TYPE OF EMISSION	STATION CALLED	CALLED BY	STATION HEARD OR WORKED RST	REPORT RECEIVED RST	TIME QSO ENDED	REMARKS	QSL S R

Obtainable from—

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Price **4/6** plus **9d.** Postage & Wrapping

D.X.C.C. LISTING

Listed below are the highest twelve members in each section. New members and those whose totals have been amended will also be shown.

PHONE

Call	Cer. No.	C'nt-ries	Call	Cer. No.	C'nt-ries
VK3WL	14	211	VK3EE	10	163
VK3ATN	26	204	VK9DB	31	161
VK4FJ	21	202	VK4WF	16	160
VK6RU	2	194	VK4RW	23	157
VK4HR	12	192	VK3JD	1	155
VK3BZ	3	176	VK4KS	9	152

C.W.

Call	Cer. No.	C'nt-ries	Call	Cer. No.	C'nt-ries
VK3KB	10	235	VK3XU	48	213
VK4FJ	29	234	VK5BY	45	202
VK3FH	15	226	VK2EO	2	191
VK3CX	26	223	VK3YL	39	190
VK3BZ	6	222	VK6RU	18	177
VK4HR	8	218	VK5RX	23	176

Amendments

VK9XK .. 41 154

OPEN

Call	Cer. No.	C'nt-ries	Call	Cer. No.	C'nt-ries
VK2ACX	6	250	VK3XU	61	221
VK4FJ	32	238	VK3JE	12	210
VK4HR	7	233	VK3ATN	69	210
VK3BZ	4	231	VK3HG	3	201
VK3WL	45	225	VK2NS	16	195
VK6RU	8	224	VK9DB	59	182

Amendments

VK9XK .. 54 156 VK4BG .. 66 130

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The honours this month go to VK5 for the way they took advantage of the opening to KH6 on April 1. VKs 5GB, 5MK, 5MT, and 5ZAQ were the wide-awake boys who were rewarded for tuning outside the first couple of Kc. of the band. Ron 5MK heard a weak signal on 50.5 around 2030 E.A.S.T. At the time the VK4/5 path was wide open with S9 plus signals mutilated by bad QSB. 5GB made the first contact with KH6PP who was now S9, then the others followed suit. It is not known whether the band closed down then or whether there were no other VK5s on the job. Later the same night 5KC copied a weak c.w. signal which signed VS6WH. Several weak JA signals were heard. Pity a good opening was not on to the north as well, that VS6 would have had a lot of fun with the gang. The same evening produced a good opening between VK3 and JA, signals peaking S9 each way.

The JA story hardly needs writing about for those north of the Murray River, and except for VK7 an opening to there is no longer a novelty. Virtually daily into VK4, sometimes commencing early in the morning and going until late at night. Signals often like locals. Adelaide had a run of 14 days with signals nearly every day, one opening commenced at 0830 and lasted nearly all day. Hughie 5BC, Renmark, a bit to the east, chatted to our northern off-siders on 23 consecutive days. VK3 had quite a few openings during this period and had good entertainment, but at times had to fight for contacts in competition with the other Divisions. VK6 were not out in the cold, Rolo 6BO has now contacted all JA districts. One break-through lasted practically alll day.

Pacific.—VK4 found that monitoring the Pacific area paid dividends, contacts being made with KX6, KH6 and W land. If you want to work a W, ask 4HD how to do it. 60 miles north of Brisbane, he has contacted W on four separate occasions to March 24. 0800-0930 E.A.S.T. he found to be the best period. During the session on March 16 he contacted seven W6s on both phone and c.w. Noel 4BT heard W6BAZ as late as 1500 one day. Vern 4LK is a sad man. Making a shift of QTH the KH6s came in the day he stripped his gear down. Hearing of the opening he rushed his beam up again and put the tx/rx back on the job, but by then the opening was gone. The following week-end he returned to his old QTH for the rest of his gear and on his return found out that W and KH6 had been worked by the gang in his absence. Since then he has caugut up to KH6NS but has not heard any sign of a W so far. KX6AF provided a new country and further thrills for the VK4 gang by putting in a good signal several times, Bob 4NG possibly making the first contact at 1130 E.A.S.T., March 20. Not to be outdone, the Brisbane gang followed suit. KX6AF also contacted ZL1 and 2 during the same period. Still no sign of KR6 or DU, VR2 or ZK1. VS2DQ has been worked by VK9XK and either heard or worked by VK6. Ron 5MK believes that he heard a weak VS2 signal but is not certain of it.

Russ VK9XK, Port Moresby, 50.01 Mc. felt the urge to try 50 Mc. again on March 27 at 2130, so switched on the receiver but found it dead. 30 minutes work on it and it came to life, the first signal he heard on it was JA6FR on c.w. The panic started to switch on the tx. Fortunately it worked, so Russ frantically called CQ even though the beam was tied down to the north east. As Russ puts it, "on changing over was amazed to hear a lovely m.c.w. sig calling me and signing KH6PP. An excellent contact resulted with 579 each way, no QSB. KH6PP using 100w. to a 6 el. beam. When he went over to phone he remained S7, R5." Russ then untied his beam and swung it north to round off the night with half a dozen contacts with JA2, 3, 6. Through the JA QRM Russ could hear Aussie voices, but the only one he thought he identified was VK6BO calling a JA. 9XK is looking for contacts to the south each evening at 1930, immediately after the A.B.C. news session. Bill 9BW, Rabaul, 50.24 Mc. is now active with 25 watts to a cubical quad and "full of hope." He should have been well into the DX by now, and is also looking for VK contacts.

Clarification of the par. last month that VK0KT had heard a W6 arrived. On March 9 at 1140 E.A.S.T. a W6 three-letter call was heard but owing to bad QSB the last letter was missed. The call was identified as W6UQ?, San Fernando Valley, Cal., the station op. giving his locality during the CQ. 0KT has heard other weak carriers but has not been able to identify any of them. Two beams are used there on Macquarie Island, one fixed over the Pacific towards W, the other a rotary, normally pointed at VK. The weekly skeds as previously listed in "A.R." are still kept on 50.19 Mc. Further to the east, over in ZL and during the week ending April 12, one of the I.G.Y. stations located in South America was heard so the boys over there are busy lining up skeds with South American stations. Ws have been worked consistently, to March 22 ZL2DS had contacted 40 in the W4, 5, 6, 7 call areas.

DX to look for.—ZK1BS is now active and runs skeds with W6PUZ at 1930 G.M.T., at other times he has his beam elsewhere. VS6CJ running 25w., c.w. on 50.55 Mc. at 1230-1400 G.M.T. each Sunday, Monday, Wednesday, Friday and Saturday. George is looking for contacts with VK and ZL and is quite willing to run a sked if anyone wishes to be the VK end. Around his frequency we have VS2DQ 50.6, VS6CJ 50.55 and KH6PP 50.5. Incidentally, VS2DQ looks for VKs daily at 1200 E.A.S.T.

Rumours.—Unconfirmed reports have been received that a VK6 was heard at good strength in South Africa, that ZL stations have worked into XE, and that a VR2 is now active on 50 Mc.

Predictions.—45 Mc. for May indicates that the path VK6/South Africa should be open 0800-0930 G.M.T. with a possible opening VK6/Far East 0100-0400 G.M.T. For June that VK6/Far East could possibly be open 0000-0100 G.M.T. With an ounce of luck and a lot of monitoring it is highly possible that the VK6/ZS contact could take place. All the VK gang hope that it does.

Woe.—The VK3 Melbourne gang were caught asleep on Sunday, April 13 in the a.m. 3ALZ came on about 0830 to work VKs 9BW and 9XK with signals S9 plus each way, to contact 5BC on back scatter, and to hear the JAs fading out. Sid 3CI, Nagambie, was in the fun. By the time the next VK3 came up at 0920 the band was flat. Moral: When you can monitor the bands early over the week-end, do so! No use moaning that you can't listen during the week, that you have to go to work early.

As a parting thought, Vern 4LK reports that some of the JA stations are listed in a copy of a Japanese "CQ" as having worked 27 countries.

V.H.F. CORRESPONDENTS PLEASE NOTE

In future correspondents to this page are requested to forward their v.h.f. notes direct to Frank O'Dwyer, VK3OF, 190 Thomas Street, Hampton, Vic., to reach him by the **first day of each month** preceding publication. This will allow him time to compile the notes for "A.R."—Editor.

VICTORIA

V.h.f. Group Meeting.—At the meeting of the Group held in March, office-bearers were elected for the ensuing year. Herb 3JO and brother Bob 3OJ were re-elected as President and Secretary respectively. Bob 3ZAN was elected as programme manager and John 3ZAI as scribe. As no lecture had been arranged for this meeting the rest of the time was taken up with informal discussion.

Field Day.—Five portable stations were active on 2nd March. 3BI on 6, 2 and 1 mx, 3ZCG, 3ANL, 3ZBP all on 2 mx, 3ZAI on 6, 2 and 1 mx. Unfortunately George 3ZCG had trouble with his motor generator set and did not commence operation until late in the afternoon. The results were: 1st, 3ZAI, 65 points. As no other logs were received the other places were unfilled.

50 Mc.—New stations on the band include Bert 3KU, Sam 3KC (where have you been Sam?), and Tim 3AYZ. 3ATN Birchip, 3ZCW Ouyen and 3NN at Yanac are also active and have been working into JA. Lindsay 3ZEW, who was operating fixed portable in Melb. for a time, is now back in Hopetoun and is running 18w. to a 2E26 feeding into a 3 el. beam. He operates on either of 50.04 or 50.25 Mc. Openings to JA during March were the best since the opening of the band and many VK3 stations have worked through to them. Sporadic E contacts for the month were few, the band being open only to VK4.

144 Mc.—George 3ZEA at Rainbow is running 10w. to a 522 and using a 5 over 5 beam. He is also building 6 mx gear. 3ACE at Hopetoun has similar equipment on 144.25. Both stations are looking for Melbourne contacts.

288 Mc.—Activity on this band has increased considerably of late. New stations active include 3OT Brighton, 3ZDZ Oakleigh, 3AHD Albert Park, 3ZDO Toorak, 3ZFY Bayswater, who uses p.p. 7193s and a 5 el. yagi, and 3ZFZ also of Bayswater, who uses p.p. 7193s into a 16 el. beam.

T.V.—3AUX and 3AAK have exchanged t.v. test patterns and sound between Sandringham and Elwood on 288 Mc. Both stations were using high gain beams and home-built rx's using a 625 line system. 3AUX uses a 5527 iconoscope camera tube and the final stage of his tx consists of two WE316As modulated by three 807s in parallel. 3AAK is using a flying spot scanner.

Jottings.—Don Knox (6ZAK) and Len Tate (6ZAT) are more than busy these days at the Melbourne University. Their gear is in transit from VK6 and the boys are searching for digs which will permit their further participation in the art. Welcome to VK3 Don and Len.

Fox Hunt.—This was held on Wednesday evening, 9th April, and Roy 3ARY was the fox. There were five hound cars, which was the best attendance for some time. Among these was Bert Stebbings who was out for the first time. Bert had trouble with his converter but this has made him keener to compete next time. The route traversed was Studley Park, Hawthorn, Toorak and Camberwell. At one time the fox, with Tom 3AOG and Norm 3ZBU who were all parked in an elevated position, had the pleasure of watching Ray Price travelling over the same track about four times. He could not find the entrance to the car park. However, he soon caught up with the fox after the latter had tried to sneak away. The fox also had the pleasure of seeing Maurie 3MS turning out of an intersection just as he was entering. The final location was at the home of George 3WJ and his XYL Joan. Joan went to a lot of trouble with coffee and sandwiches which were enjoyed by all present. Many thanks Joan and George. Tom 3AOG was the winner for the evening with Ray Price runner-up. The next Fox Hunt will be held on 14th May, and Norm 3ZBU will be the fox on that occasion.—3ZAI.

SOUTH AUSTRALIA

Events this month have been rather smarter than usual, with break-throughs happening in various directions and culminating on 1st April with the KH6PP contacts. Of course, our VK4 friends have done better than we have by making it to W land fairly freely, but in this "harder-to-get" DX part of the globe, or is it "remote", we are happy to hear them and then work a modest few.

It is rather difficult to set out events in true chronological order, but as near as possible as reported by Ron 5MK, it appears that at about 2,000 C.S.T. on the 1st, a fluttery carrier was heard on 50.5 Mc. whilst at the sime time the band was open to VK4. An American accent voice was heard on 50.5 but no call sign, so Ron linked up with 4BT at 2010 and whilst in QSO with Noel, heard George 5GB make the contact with KH6PP.

As George finished the KH was then linked with Ron 5MK, Eric 5AZQ, and Keith 5MT with reports 5 and 9 to 20 over, a really smart piece of work and an incentive to keep listening. News of this got about smartly and some of the boys waited up late just in case the m.u.f. should rise for the extra 2,000 miles to the West Coast of the States, but nothing was heard.

Reg 5QR was sitting on the fence waiting for Keith 5MT to finish so he could make it, but the band folded up so he missed out. Col 5RO was out for the evening, and yours truly was at the Divisional Council meeting, so we are both really moaning; of course it may happen again—we hope.

Then in a slightly different direction as reported by Ken 5KC, and again on 1st April, he was copying VS6WH on 50 Mc. c.w., certainly weak and a bit too "in-and-out" to make a contact of it.

Of course all of this does not put the JA position right out of court, because the band in that direction has been opening regularly and reported by Hughie 5BC as being useable for 23 consecutive days in March. Keith 5MT worked a JA every three minutes after 2100 hours on the 21st and according to latest information Col 5RO has scored 53 JA contacts (from 48 different call signs), with Keith 5MT having 51 contacts (41 different stations). Very

good going fellows and congrats from us also-rans.

By the way, did you hear how Col 5RO sometimes makes the grade? He has his junior op. monitor the band and when he can hear 'em, calls pop to come in and work 'em. Not bad and from all accounts it is successful too, because he has worked all JA districts on 6 mx.

During the month Bill 5ZAX and George 5GB went over to the Peninsula to Bill's country seat and set about starting up the necessary for v.h.f. working from that location. The 240v. was installed and some test transmissions done on both 2 and 6, the signal being copied on the mainland quite well and as far afield as Hughie 5BC, and on one occasion they contacted 7ZAI, so we are hoping to hear a lot from that "ideal" and noise free location as he gets things all ship-shape. From all reports, it will be a Ham's dream show.

Keith 5MT has done some audio modifications on his rig and comes up with a very strong signal now as a result of such changes. It sounds really good, too, the restriction having been carried out without much change to the usual audio we hear from him. George 5GB in his "inimitable" way was heard to report that "in spite of phenominally bad power leaks and inexplicable technical difficulties," he considered the new audio to be as good as he had heard, so there you are Keith, it must be good.

A new contact for this QTH recently was Graham 5ZAP, who on 6 mx was putting in quite a signal 5 x 9 plus. He is using a 6V6 tritet to a 6V6 doubler to an 807 final (18 watts) into a 4 el. beam 45 ft. high. His rx being a crystal front end 6AC7, 6AC7, 6J6 osc., 6AC7 i.f. to an AR8, with the same sort of set-up to receive 2 but no tx as yet. Mod. osc. on 1 completes the picture there. Graham has had a taste of JA, so all is well there.

South East boys report that some 2 mx activity has been experienced there. Col. 5CJ, apart from working quite a number of regular VK3s added several new QSL cards to his collection, as also did Leo 5ZAG, one being a contact with 7LZ.

Claude 5CH is at present completing the construction of a 2 mx final using an 829B. Expects to run an input of 80w. which should give him a mighty signal, and make his presence heard on the band when conditions are OK for DX.

Associate member, Don Pitt, has recently filled in the necessary forms to obtain his L.A.O.C.P. and he expects it any day now. Congrats., Don, we look forward to hearing you on the band.

Dave 5AW has been busy constructing and matching up a new long yagi for 2 mx. Made himself a s.w.r. bridge and is getting things just right. Dave is also active on 6 and has made some nice contacts on that band.

Advice received that ZE2KE is beaming to VK5 Saturday, 1430 Adelaide time, and looking for contacts. Who will make it first?—5EF.

WESTERN AUSTRALIA

50 Mc.—JAs hit the West with good sigs early in March and have been in and out ever since. The opening occurred during a very hot spell with the temperature around the 100 mark. Bob 6BE, on long service leave, has worked JAs fairly consistently, contacts number around the 80 mark. All the active VK6s have worked the DX. These are 6BO, 6GB, 6ZBU, 6ZBG and 6ZAV, also Wally 6WG who we heard being called by the Japs. We are hoping for contacts to eventuate from VS and ZS. Who knows?

144 Mc.—Ian 6CL has got going on 2 and was heard in Perth by 6BO and 6ZAV on his tripler, running about 4w. into a long yagi—a distance of approx. 140 miles. 6ZAV has had good contacts cross-band with Ian, 144-3.5 Mc. The first sked with 6CL using his 829B was not so hot, conditions were not good, sigs. were only 4/4, but the next night Ian worked 6BO and 6ZAV with 5/9 sigs, which had to be heard to be believed.

The last Fox Hunt on 144 Mc. on March 15 turned out to be a mobile one. Frank 6CC was the fox and he led the boys a bit of a dance. Don 6HK was first in, followed by Rolo 6BO. Supper at Frank's QTH followed, winding up another enjoyable evening.

The March V.h.f. Group meeting was held on Monday night the 24th with quite a good attendance. Jack 6ZBU was in the chair. Many ideas were brought up and discussed to improve the membership and general interest in the Group's activities. The talk for the evening was given by Bob 6BE on his impressions of 50 Mc. operation and conditions, and conclusions drawn by him since he became interested in the band. This was followed by tape recordings of signals heard on the band, including JAs, etc. Many thanks Bob, it was very interesting.—6ZAV.

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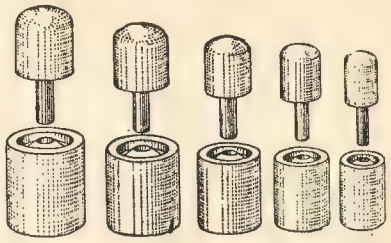

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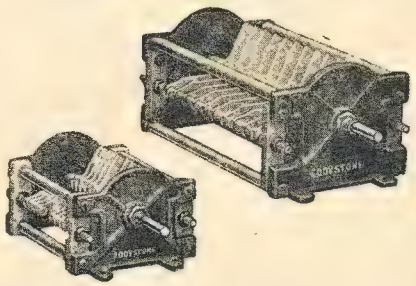

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XYL'S AND HARMONICS

Amateur Radio enthusiasts come in for little publicity or general comment, except of course when disaster strikes and their voluntary manning of emergency communications services is widely and deservedly commended. But if the self-styled Hams are little enough known, the YLs and Harmonics are, I claim, downright neglected!

Who are these strange creatures of such exotic title? XYLs are the long-suffering wives of Hams, their name being derived by rather cruel if ingenious reasoning from the abbreviation YL, used for "young lady" in Morse Code transmissions. A Ham's wife is therefore his ex-young lady: YL!

Harmonics, then, you will rightly deduce, are a Ham's children; home come they by their name? Technically, a harmonic is a subsidiary signal during transmission of radio waves; an offshoot of the main frequency. What more logical then than to call the children, the "offshoots" of the Ham himself, Harmonics?

If this seems complex, you may thank your lucky stars if you're not an YL, for it is nothing compared with the other strange goings-on of a Ham household. A part of the house, varying in size with the particular Ham's degree of enthusiasm and of tidiness (and the latter seems strangely underdeveloped, even in otherwise tidy men), is given over to a miscellany of radio gear: trailing wires, coils, switches, valves, resistors, condensers, to say nothing of at least one transmitter and short wave receiver. The last may be a commercial set, or one lovingly built by the Ham himself—in other words, a "home-brew."

This sacred area, be it a corner of the verandah, an old shed in the backyard, or (in the case of unusually patient XYLs) portion of the tastefully-furnished lounge, is invariably called the "shack." (Even our two-year-old has learnt to announce his father's disappearance into the whole room here given over to the hobby with "Daddy's in 'e shack.") Once the door has shut, it is of little use going in, though the domestic heavens may fall. One's greeting will be either the vague grunt of one fully occupied with the delight of constructing some new electronic horror; or the rapt unseeing look of one deep in calculation of the inductance of the latest coil, taking into account the number of turns of wire, distance between the turns, etc., etc., and involving frequent reference to logarithm tables of forbidding aspect; or alternatively, imperious gesturings for silence, while out of the receiver or into the microphone pours some such jargon as "Your report is 5 and 9. Received your handle OK; the handle here is John—Jig, Oboe, How, Nan. I will be pleased to QSL you and look forward to another pleasant QSO. 73, Old Man! VK2XYZ to transmit, VK5ZYX is over and clear." And they will remain happily in the shack listening to this kind of thing for hours! When the DX—overseas—stations are coming through loud and clear the XYL gives up all hope of father's appearance at the meal-table and resignedly carries his serving into the shack. At any time she may be forbidden to continue with much-needed family sewing if it so happens that her machine produces the slightest amount of electrical noise!

So much for the debit side—for it must be admitted in all fairness that even for the XYLs Ham Radio has a lot to show on the credit side of the ledger. We have recently moved Interstate, and have had a lot of pleasure keeping in touch with Ham friends in our former home town and hearing the local news as soon as the residents do. Many are the friendships made, in Australia and overseas, with Hams and XYLs one has never seen. Yes, XYLs are sometimes permitted to speak, though it is to be noted that a Ham who has no difficulty in maintaining a QSO—a radio conversation, that is—for one hour or even more, will trot out the threadbare fairly tale about how much women can talk even after only a few widely sentences! Harmonics, too, if well-behaved, are permitted to greet those of distant Hams.

The hobby is a complete relaxation for men who, like my husband, lead a busy and exacting professional life—and, as many an XYL has been heard to say, it's a hobby that keeps them at home under the wifely eye! There is a happy spirit of freemasonry among the Hams; Christian names only are used, termed "handles" and the Australian radio mechanic, say, with his home transmitter, chats happily on an equal footing with the high-ranking diplomat at the American Embassy in Ecuador.

No matter when or in what circumstances a Ham visits another—on a holiday trip, maybe—he and his family are assured of a real welcome, wholehearted hospitality, and any assistance that may perhaps be needed. To many, for instance the Americans and their wives stationed on tiny Pacific islands, Ham Radio is an absorbing interest and a means of abolishing monotony.

And, finally, it is the most vivid, most personal, most satisfying way, short of travel itself, which is not possible for all of us, of obtaining a living glimpse into the life of those in other lands.

[The foregoing was supplied by Mrs. Lesley Fullagar, XYL of VK2AJY, and comprised the basis of a broadcast over the A.B.C. Women's Session some time ago.]

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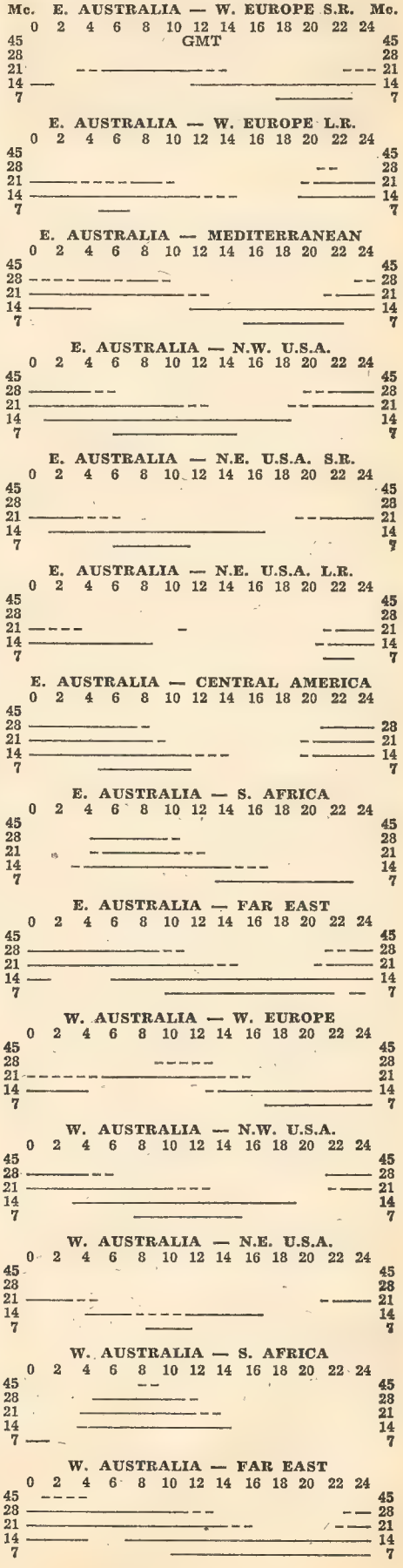
PREDICTION CHART, MAY '58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W. AUSTRALIA — N.E. U.S.A.
W. AUSTRALIA — S. AFRICA
W. AUSTRALIA — FAR EAST

NOTES

FEDERAL QSL BUREAU

Between May 16 and 30, 1958, G3AAE, G3BQR, G3BZG, and G3JUL will be making a DX-pedition to Alderney in the Channel Islands, using the call sign GC3AAE. They will operate on 3.5, 7, 14, 21 and 28 Mc. c.w., working shifts so that the station will be on the air continuously 24 hours per day throughout the full period of the expedition. QSL cards should be sent via the R.S.G.B.

Martin OY7ML is anxious to contact VK on 3.5 Mc. Anyone interested should make a sked six weeks in advance by airmail to G6YQ who will then advise OY7ML. Martin uses 3505 Kc. Anyone awaiting a QSL is advised that he has run out of cards but a further supply is due to arrive any time.

Felix FK8AC advises that FK0AD, operating on the Chesterfield Islands, is not licensed and QSLs (if any) will not be recognised.

In an interesting letter to the Federal QSL Manager, Doug Twigg, VK0IJ, describes the trip down to Mawson and the erection of the weather station at Lewis Islet. Dated Mawson, 28/2/58, Doug writes:—

"We went straight to Davis Bay, approximately the same longitude as Adelaide, to instal the Automatic Weather Station on Lewis Islet. The operation went without a hitch and the station is now operating OK. Davis and Macquarie Island have the job of intercepting the broadcasts, and I believe they get two or three broadcasts out of four per day, which is not bad for a couple of 40-watt transmitters and dipoles. Transmission times are at 0605z, 1125z, 1815z and 2355z daily, transmissions lasting about two minutes. If you desire to intercept, start looking for it about five minutes early as I think the master clock is gaining about four seconds per day. The frequencies are 7315 Kc. and 15845 Kc., being radiated simultaneously. Call sign VNX is transmitted about 14 times at the start then the met. data consisting of letters is transmitted. The station was officially in operation on 23rd January and so far is still going.

"While we (three of us) were on Lewis Islet installing the weather station, the ship sailed east to explore the coast of Australian Territory Eastern Sector. They were not very successful due to heavy pack ice. They called in at the French base at Adelie Land and had a riotous time with the French.

"When we left Lewis Islet we sailed west, attempted a visit to the Yanks at Wilkes Base, but unfortunately pack ice beat us again. We flew the Beaver aircraft in and picked up the Australian Observer there to continue the journey with us. Next we succeeded in getting into Mirny, the Russian base, where a good time was had by all. There is a definite technique in drinking vodka and staying sober. Must tell you about it some time. I saw the UA7KAE set-up, actually it is an amenities facility, similar to the KC4s. They use one of the station 1kw. tx and sit down at a vacant operating position in the radio shack. Vladimir, the op., was doing pretty good at DX that day I saw him, worked 20 odd countries in an afternoon!! Mirny is a large station with about 120 men wintering there. They showed us all they had, no secrets at Mirny.

"We next arrived at Davis to relieve the four men there. Chas. VK0AB was sure glad to see us. He has worked his DXCC, WAS, etc., only wants confirmations to clinch the deal. Davis is a very nice station, neat, compact and tidy. We did the change-over there in three days.

"We next arrived at Mawson on 10th Feb., since then we have been very busy unloading stores, building three more huts, extending the hangar and erecting a 104 ft. vertical radiator for the radio beacon on 410 Kc. I have a 1kw. transmitter to install in the radio shack. It covers 2-20 Mc. on c.w. and r.t. I have also to erect a new aerial system, putting up horizontal vees on Perth and McMurdo Sound, also a number of wide-band dipoles for the receivers. So there is lots for me to do.

"The radio sked commitments are heavy at Mawson and it will be difficult to do any Hamming here. Best time available during the day is 0930z to 1030z and then after 1630z at nights. There are seven Hams here, so it will be very difficult to all fit in operating times. It is very difficult to receive when the main transmitters are running, due to large r.f. signals QRM. So that is why Mawson Hams don't get very active here. Davis is the best station for Hams due to the little official radio work.

"The weather is getting colder now, it won't be long when outside work will be difficult. Average daily temps. being around 20-25 degrees F. and minimum night temps. dropping to about 10 degrees F. The water around the shore of the harbour is already starting to freeze. The old hands tell us winter appears to be coming in early this year.

"We have a weekly sked with VK2EG at 0930z on Sundays. Also have a weekly sked at 0930z on Saturdays with Fred VK3YS."

Ray Jones, VK3RJ, Manager.

CONTEST CALENDAR

Compiled by W.I.A. Fed. Contest Com.

★

HELVETIA 22—

Date: Third week-end May.

R.D. CONTEST—

Dates: Saturday, 16th August, 1800 hrs. E.A.S.T.; Sunday, 17th August, 1759 hrs. E.A.S.T.

VK-ZL DX 1958—

1st and 2nd Week-End October.

NEW SOUTH WALES

The Annual General Meeting of the New South Wales Division was held on Friday, 28th March, at Science House, Gloucester St., Sydney, when 75 members attended including a number of country members.

The first item on the agenda was the election of Council for the forthcoming year. Only seven nominations were received and as there were only seven positions to be filled, no ballot was required. Those elected were P. Healey, 2APQ; N. Beard, 2ALJ; R. Godsall, 2ARG; D. Duff, 2EO; C. Smith, 2CD; M. Sobels, 2OT; M. Marsden, 2VV. The only change is the election of 2VV.

The annual report was accepted on the motion of G. Hall, 2AGH and A. Mead, 2AJA. In moving the motion, 2AGH congratulated the President in the manner in which the report was given and Council on their efforts during their term of office and commented on sections of the report dealing with the Divisional Library and the Advisory Committee. In supporting the motion, 2AJA said he fully agreed with the views of 2AGH.

The Auditors report was presented by the Divisional Treasurer, C. Smith, 2CD, who praised the work done by the Auditor, W. Yates, 2AWY, which was a model of accountancy practice and a beautifully clear presentation of the accounts.

On his report the Treasurer reported that the Division was in a strong financial position and that during the year the assets of the Division were increased by £1,600, thereby making the Institute more valuable and attractive to members and potential members which was borne out by the high percentage increase in members. He also formally moved, that the offer of 2AWY to accept the duties of Auditor for the next year be accepted with the sincere thanks of Council and members.

The President then spoke on the notice of motion that Messrs. J. Moyle, 2JU, D. Duff, 2EO, and W. Lewis, 2YB, be elected Honorary Life Members and in formally moving the motion praised the work done by these members for the Institute and Amateur Radio generally. The motion was seconded by Max Sobels, 2OT, who supported the President's remarks by giving further praise for the efforts of those members. V. Fitton, 2SF, spoke on behalf of members of the Hunter Branch in supporting the motion; sixteen proxy votes, all in the affirmative, were received from Hunter Branch members. D. Evans, 2AYE, expressed the view that the move was long overdue. The motion was carried with only one member present dissenting.

The President then presented each of the three with a Membership Certificate endorsed Life Membership and congratulated them individually on their elevation and thanked them for their efforts in Divisional activities and Amateur Radio, which was followed by hearty applause by members present.

The final item on the agenda was the presentation of the Adam's Trophy for the article published in "Amateur Radio" which was considered by Council to be the best from a VK2 member. The recipient this year was Hans Ruckett, 2AOU, who was congratulated by Council and members for his efforts.

The President then thanked members of Council for the work they had done during the year and members generally for their co-operation in the various aspects of Divisional activities and for the assistance received which enabled him to carry out his duties as President.

The annual meeting was then closed and the normal monthly meeting opened. The lecture for the evening was given by Mr. Stan Graves, of the School of Electronics and Communication. The subject, "Class C Amplifiers." Mr. Graves covered the subject very fully by illustrating various aspects and explanations of the various formulae used to determine the best operating conditions and finally giving an example of the application of the formula to a particular tube. The vote of thanks was ably moved by 2SF for a very excellent lecture.

Fourteen new members were elected to the Institute—a good start for the New Year.

The formation of the Short Wave Listeners' Section of the Division was announced; the inaugural meeting to be held on 14th April at the Gore Hill Technical College. Any interested parties are invited to contact the Secretary, Box 1734, G.P.O., Sydney, for particulars. Country members are specially invited to send in suggestions from their point of view.

Subscriptions for the year 1958-59 are coming in steadily. Members who have not already done so, are urged to finalise the remittance as soon as possible.

Good progress is being made in amount donated to the I.T.U. Fund, which Council think is the most pressing matter for 1958 and members are urged to give their support and invite non-members to join in providing for a fund to enable a representative to be sent to Geneva to represent the Australian Amateur.

HUNTER BRANCH

Howdy folks; a new correspondent has been forced upon you, but if he does as good a job as predecessor Les 2AOR, then you should be satisfied.

The Annual Meeting of the Hunter Branch was held at the University of Technology, Tighes Hill, and an excellent attendance was recorded. After President Lionel welcomed our Divisional President Pierce, the election of officers resulted in the re-election of all bar one. Though Lionel tried to step down, the couple nominated declined.

Election of officers—President, Lionel 2CS; Vice-President, Stuart 2ZDF; Secretary, Charlie 2ARV; Treasurer, Bill 2XT; Social Secretary Gordon Sutherland; Social Treasurer, Bob Bailey; Zone Correspondent, Bob 2AQR.

Pierce spoke at length and gave an excellent resume of the year's Divisional activities and answered several leading questions.

Quite a discussion centered around a certain 6d. lucky dip and I was requested to try and silence certain statements that the Branch received 67 pieces to be divided amongst 41 persons.

All were sorry to hear that Ron 2ASJ was back in hospital—speedy recovery fellow. Muriel 2AIA was tickled pink to receive her prize for winner of the Blackalls Scramble; maybe she will be able to read where her lost 4 watts have gone. The boys on the Monday 2AWX hook-up were given a shock when Jim 2AHT called in. Camel Bill 2ZS visited 2ZL and 2AQR whilst on his annual; was disappointed that Bill's puff-puff didn't puff. Shades of Methuselah, heard 2CS and Charlie 2AZK recounting old school times together. 2AAA with less than 1 watt on Mr. Royal received and brought back to mind old QRP days.

Our social gathering, held at Bill's 2XT residence each fourth Wednesday of the month, was well attended with the Phenol Bay tribe predominating. All were pleased to see Rod 2ACU who called in on his way to the capital. How he got back to Urunga without being way-laid beats me.

Don't forget the next Branch meeting at the University of Technology, 8 p.m. on May 9, and the social at Bill's on 28th.

VICTORIA

The Annual General Meeting held on 2nd April, '58, was one of the liveliest we have had for some years, even though only 50 odd members attended. There were so many subjects raised and so much heat generated under the collars that in some respects the night could almost be likened to a grouch night. This was a pity in a way because the President and his Council came in for some rather hastily conceived criticism which was entirely unwarranted in the light of achievements and it is felt that this must detract from the well being of the Division in general. No doubt the speakers who raised these points did so in good faith and with the interests of the Institute at heart, but it must have been rather galling to those who have given so lavishly

of their time to have to listen to a spate of criticism and no encouragement. Friendly argument is the keynote of progress, so those of us who have the "gift of the gab" should see that we use our talents intelligently: to build, not destroy.

Much discussion followed the reading of the President's report and the matter of membership and attendances at meetings was well to the fore. As you will see from the report, membership stands at 711, which is about 43 less than last year. George Robertson (3WJ) is doing all he can by chasing up old members and seeing that each new licensee is issued with details of the W.I.A. and its activities, but this is more than one man can handle effectively, and George would appreciate the assistance of two other members to help in this regard. What about it chaps? The President suggested that we should aim at 100 new members for the coming year so let's all give a hand. With regard to attendances at meetings most organisations are currently suffering from this complaint and there seems to be no reasonable explanation as to why this should be. Our meetings are always full of interest, so, short of shanghaing members, there seems to be nothing further that can be done to better attendances. Are there any suggestions?

This apparent lack of interest is also evidenced in nominations for Council. It is very seldom that sufficient nominations are received and it is usual for the Secretary to have to chase around likely candidates at the last minute to get the necessary 10 nominations. This year was no exception and we just scraped home with the bare quota. As a result, there was no voting and the following were elected to Council for the ensuing year: Messrs. F. G. Bail (3YS), C. C. Chirnside (3WQ), C. S. Donoghue (3DQ), L. S. Dixon (3JE), G. W. Dennis (3TF), H. G. Hodge (3HE), J. R. Lancaster (3JL), D. L. Robinson (3ALD), L. G. H. T. Robertson (3WJ), D. A. Wardlaw (3ADW). Nominations forwarded to Council for President of the Division were Fred 3YS and George 3WJ, and Fred 3YS was subsequently elected. Congratulations and every good wish for a successful year of office.

Bert 3HE and Gordon 3TF are the two Vice-Presidents for the year.

The Treasurer's report was read by the Secretary this year as our Treasurer was unable to attend through ill health. As you know, Jim Marsland (3NY) is our Treasurer and you may recall that Jim was also Editor of the magazine. Jim has been actively associated with the Division in some official capacity for very many years and the Institute owes him a very great debt of gratitude. Unfortunately, Jim has not enjoyed the best of health of late and he has been advised by his medico to relinquish some of his outside activities. Jim hopes to continue as Treasurer but felt that he must resign as Editor if he is to give himself a chance to recover. Hearty good wishes for a speedy recovery Jim.

As a result of Jim's unavoidable absence from the meeting, a number of matters in the financial report were left unanswered and these have been held over until a later meeting.

Arising from the Treasurer's report was the apparent need for more funds to meet our various commitments and the suggestion was made that fees be raised from £2/2/0 to £4/4/0. Much argument for and against was heard and the matter has now been referred to Council for consideration and appropriate action. It was decided also to form a building investigation committee to see if further progress can be made in this direction. Disposals activities were aired in great detail and it should now be clear to all how this department functions and what is at present in hand.

Once again reference was made to the need for an I.T.U. representative and the proposals for financing this very important project. The excellent address given by Doug Bowie (3DU) on a recent Sunday morning broadcast gave the position quite clearly and Doug was commended on his very fine effort. It is intended to circularise all licensed Amateurs on this matter in due course and in the meantime Doug will be doing some good spade work overseas during his current visit.

At the general meeting which immediately followed the annual meeting, the following new members were admitted: Associates—D. W. Reid and E. G. Hutchins. Full members—G. W. J. Mackay (3AWP), F. R. Williams (3ZDW) and V. E. Maddern (3AEQ).

David 3ADW gave the Federal Council report and pointed out that the next Federal Convention is scheduled for next Easter and will again be held in Melbourne. This meeting has still to be ratified.

Short wave listeners will be interested to hear that a group is to be formed in the VK2 Division. This is very good news.

Lectures: You will be interested to hear that Brother V. R. McKenna, who gave us a recent lecture and a conducted tour of part of the University, has obtained his Science Degree at the Melbourne University. Heartiest congratulations are extended to him. At the next general meeting to be held on 7th May, there will be a practical demonstration of "T.V. Receiver Alignment" by members of the Royal Melbourne Technical College staff. So roll up and make this a bumper night.

80 METRE TRANSMITTER HUNT

The tx was hidden by Roy 3ARY and Ray 3KD at Dinny's Picnic Ground, Mount Waverley. The tx was buried in the bank of the creek and a circular aerial was strung out around the picnic ground. The first to arrive was Laurie 3ALY, followed later by Tom 3AOG and Bert Stebbings. After approximately 30 minutes Laurie braved the slippery log and crossed the creek and then found the tx, a few minutes afterwards he was closely followed by Ian Simmonds who was with Tom 3IU and then Bert Stebbings.

The official placings were: Laurie 3ALY, 1st; Tom 3IU, 2nd; and Bert Stebbings, 3rd.

We were pleased to see several new comers to the hunt, namely 3NI and 3IU. 3NI was heard enquiring about equipment used in tx hunting, and he hopes to be an active participant in the next hunt.

SOUTH WEST ZONE CONVENTION

The Convention held in Warrnambool on 22nd and 23rd March, '58, started off very well on Saturday with Kevin 3AKR being the first to be contacted whilst working mobile on his way to Warrnambool. He was rather bushed on arrival, so Ted 3PS ventured out and guided him in. Shortly after, Gordon 3AGV, from Colac, came up on the band and was directed to the meeting place. Neil 3HG was also working mobile, but was unable to stop whilst going through Warrnambool as he had to meet Jack 3JA at Nullawarre. Bob 3IC arrived as usual on the motor cycle, complete with Type A. We think Bob is to be praised for his loyalty to the zone, as there are a lot who wouldn't travel this way to be present, but I can't recall Bob missing a Convention and that is what we like to see. Chris. 3AXU also arrived, but did not work mobile. All Hams were greeted on arrival by Bill Wines' XYL (Lesley) and Dorothy, the wife of intending member Lindsay Moffatt, also 3XI's daughter Olive, with a cup of tea.

The Dinner took place at a local hotel at 6.30 p.m. and was officially opened by His Worship the Mayor of Warrnambool, Cr. J. A. Welsh. Several XYLs were present at the Dinner for the first time at a Warrnambool Convention. The Annual Meeting took place Saturday night at 8 p.m. and the new office-bearers for the year 1958-59 were elected. The following intending new members were welcomed: ex-3BO-OH Jack O'Hara, s.w.l's. Ron Toward, Lindsay Moffatt and Brien Mansbridge. We wish these chaps a long and happy stay with us. The following office-bearers were elected: President, Chris 3AXU; Vice-President, Gordon 3AGV; Secretary-Treasurer, Gordon 3AGE; Zone Correspondents: Bill 3AWZ and Bill Wines. The following Committee was duly elected: Harry 3XI, Jack 3JA, Jim 3ABT, Bob 3IC, and Les 3DX.

The meeting came to a close at 2200 hours after which Ted 3PS showed us some very nice transparencies which he had taken and we thank him very much. Supper was then enjoyed by all.

A highlight of the Convention was the early morning hunt by Bob 3IC and Lindsay Moffatt. No boys, not for a tx this time, Bob was in search of a bed for the remainder of the night. Apparently Bob omitted to ascertain his room number and several rooms and unsuspecting sleepers were inspected in the search. At last Bob tried the visitors' book and discovered his bedroom number only to find his bed occupied by, no not a luscious blonde, but by saws, timber, nails, etc., left behind by workmen at present doing alterations around the place. Never mind Bob, better luck next time.

On Sunday the tx hunt commenced at 10.30 instead of 10 a.m. owing to a little trouble beyond our control, however the hunters were unable to find the tx for a long time as it was situated in a boat on the Hopkins River and operated by Dr. J. K. Gardiner 3NA, and Norm Gee 3EQ. The hunters looked the boat over several times but failed to recognise any of the usual signs as the antenna was enclosed in a fishing rod. After inspecting all posts, trees etc., Dr. gave them a direct clue and shortly after Kevin 3AKR and Bill 3ZFG found same. Chris 3AXU and Lindsay Moffatt operated the 144 Mc. tx with a continual sound but as there were not sufficient participants this was not located. (The tx was in Chris' car and had never moved far from the meeting place.) Better luck next time boys.

Later Harry 3HF took the chaps on a visit to his shack and also the local broadcasting station. In the afternoon, the Scramble was won by Gordon 3AGV, the prize being a couple of bottles but not amber type. Second place went to Bill 3XE, more bottles, same variety. The prizes were kindly donated by Wally 3UT, the Mayor of the Cactus Country, and we sincerely thank him for same. Harry 3XI also receives thanks for once again having the programmes printed free of cost.

After returning to Bill Wines' QTH for a cuppa and a rag-chew, all Hams set off for their various homes after an enjoyable week-end. I would like to take this opportunity to thank all local chaps who assisted me in connection with the Convention. Our thanks also to the ladies who did a great job with the afternoon tea.

EASTERN ZONE CONVENTION

Everybody seemed to have had an enjoyable time at our Zone Convention held over week-end, March 15 and 16 at Sale. Thirty-seven sat down for the dinner, the business side of the meeting resulting in George 3ZCG being elected as President; Stan 3ZAB Vice-President, David 3DY still as Secretary and Treasurer. It was decided more activities would be conducted during the next twelve months and fox hunts and variations thereof will be introduced on the last Sunday of each month, irrespective of the fact that no communication has been received from W.I.A. regarding the legality of front-mounted beams.

Sunday morning we looked over the National Regional Station 3GI at Longford and had dinner at Seaspray. In the afternoon we had a mobile tx hunt having three runs. Ian 3AAV was fox as usual, with four hounds; points being based on mileage and time to cut down speeding.

WESTERN ZONE

We welcome back to these parts Chas. 3IB who has recently returned, after 14 months stationed on Davis Island in the Antarctic. While there Chas., under the call of VK0AB, worked well over 100 countries, so he had great success while down there. Expect to be able to get Chas to write of his experiences in this magazine at a later date.

Merv. 3AFO has been busy building a 20 mx rotary beam and expects to have it operating soon. Trev. 3ATR spends most of his Hamming time on the DX bands, and finds that so long as he can hear stations, has no trouble in working them with the help of his vee beam antenna system. Herb 3NN also works DX as well as being a regular on the zone hook-up.

Allan 3HL recently spent holidays in VK5 and was active with his mobile gear while away. He worked back to this zone on a number of occasions. Gordon 3GW, another regular on the zone hook-up, always seems to have a good solid signal down this way. Roy 3CE has now moved into the township of Beriwillock and is on the air again. The Z call sign boys have also been active. Bruce Small, of Rainbow, and Max White, of Ouyen, work through to VK5 with consistent signals. Reg Dalby, of Horsham, is at present working on his antenna system, so hopes to get some good reports in the near future.

We are pleased to know that Byron 3TA has now fully recovered from his nasty accident of some months ago.

— . . . —

QUEENSLAND

The 1958-59 Council will have its first meeting on 11th April when the distribution of the various offices will take place. Unfortunately, there were only two new nominations for positions on Council. Rather than see the Division collapse, even temporarily, the old Council decided to a man to give yet another year of service. The effective strength of the Council is now thirteen and we extend our thanks to Brian 4ZAP and Bruce 4ZBH for showing the way in which the Amateur Spirit can be put to work for the benefit of others. We wish you all the best and hope that you both lead long and distinguished careers as Councillors.

One thing you can always be certain of these days is that you'll never be killed in the rush when the call is made for new Councillors.

At the Annual General Meeting held on Friday evening, March 28, the roll-up was below average, but the boys present showed their appreciation and heartfelt thanks to Miss Clare O'Brien, who for many years has handled the "Outward" QSL Bureau. This job has become too much for one person, as Clare, for some considerable time, was spending upwards of five and six nights a week in sorting cards, etc. However, for a job well done, we say many thanks.

The President at the meeting announced his intention of handing over the reins, but he showed the Amateur Spirit by saying that if he was required for a minor position on Council he would be only too willing to help out.

On behalf of the Division, I'm sure that the boys want me to express their gratitude

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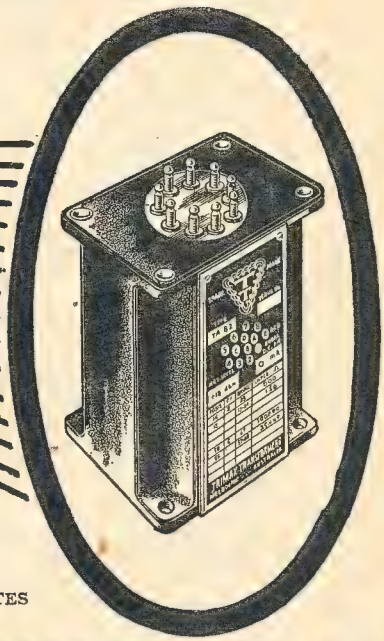

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to Frank who has carried out his duties conscientiously and graciously, always preferring to say the kind phrase, rather than the smart answer. It has been a pleasure to work with you on Council and to watch the Division grow during your term of office as President.

Vince 4VJ brought his tape recorder to the meeting and a recording of the President's address, which was played at the Annual Dinner and over 4WI, was made with suitably spaced bouts of coughing from the audience. Later on, Vince also taped mystery voices for a competition held after the annual dinner. Many thanks, Vince, for providing the equipment and for "officiating" at the dinner.

The annual dinner was held at Anzac House at 6.30 on March 29. Thirty members, guests and friends came along to pay their respects to the large field covered by the Radio fraternity. After the dinner was over, a tape was played from Bill 3UM, the Federal President. Bill presented his last message as Federal President and wished our Division every success.

Then the President proposed a toast to the Queen and this was followed by a toast to the P.M.G. Department, proposed by Vince. Mr. Paul Andrews, Chief Radio Inspector, responded on behalf of the Department, and Clive 4CC who was only too willing, for once, to let Paul do all the talking!

A competition was then held to guess the frequency of a crystal, and those D.C.A. boys really know how to zero beat, for Bert 4AO hit it right on the nose with Jim 4PR just a few Kc. out. Some nice things were said in the toast to the Trade and Mr. Cec. Ryan rose to the occasion and, in reply, said that the Amateur was always favourably considered in a certain radio warehouse.

Jim 4PR was elected to propose the toast to the Institute of Radio Engineers, which he did in his own inimitable style. He even now knows what lemonade tastes like! Herb 4ES and Graham suitably responded. The President gave the toast to our own Institute and to the Country Amateur. Eric 4XR, a visitor from Gympie, said that it was a pity that more country Hams could not attend our functions. He considered that as he was only 100 miles away, he was more fortunate than the greater percentage of the Country Amateurs and it was with pleasure that he responded on their behalf.

The mystery voices competition was won by Alan 4ZAE, who succeeded in listing correctly the ten voices. A very nice prize was awarded. The President said in his report that the Division was now 250 strong and he was indebted to Jim 4OB for the sound financial position of the Division. Unfortunately, he was unable to present a balance sheet as the Auditors had not released the books.

Frank said in his address that he appreciated the co-operation of the Councillors and Committees and all were a source of inspiration. However, he said that he was disappointed at the lack of interest shown in the appointment of a new Council, although the general meetings were reasonably well attended with an average of approximately 40 members.

Frank expressed his appreciation for the work done to 4WI by our Station Manager, Bert 4AO. The 40 mx tx has been completely re-built and the 20 mx tx is now being overhauled.

For the compilation of news 4JO was commended, while Stan 4SA as Class Manager was to be congratulated for a magnificent effort which, as far as we know, is unique in Australia.

"QTC" has gone out regularly and at times, the President said, that it was difficult to fill the paper with news. To John 4FP for the printing and Mrs. 4JO and Mrs. 4PR for the typing go the thanks of everyone.

Paul 4VS reported that library books were being constantly changed, as many as 60 Hams taking advantage of this amenity at the one time! The President thanked Paul for efficiently carrying out the task of Librarian.

Frank reported a tremendous increase in QSL cards and he thanked Jack 4JF, Inward Bureau, and Miss Clare O'Brien, Outward Bureau, for their co-operation and for their handling of their duties. As Clare was relinquishing her post after a number of years, the President asked the meeting to show its apreciation by acclamation.

The President recounted that a number of W.I.C.E.N. trials had been held and although no cyclones had made themselves felt, the network had shown just how quickly messages could be transmitted from point to point. Frank thanked Vince 4VJ as chairman of the Emergency Committee and John 4FP and Evan 4EF for attending the Civil Defence School at Mt. Macedon.

A considerable increase in activity was reported by the Federal Councillor, Arthur 4AW, and mention was made of the International Conference at Geneva next year. The President called for all Amateurs to be ready to protect their hobby by giving readily to meet the expenses of sending a representative overseas.

A report was made of the successful Convention at Palm Beach last year and Aussie 4TN and his brother-in-law were praised for their excellent organising of the whole show. Frank expressed the wish that an even better Convention be held this year and that Hams everywhere make it an unqualified success by their attendance.

Members at the dinner were reminded of the Institute's display in the City Hall last November and of the considerable interest shown by the public. It is presumed that another display will be held this year.

Financially, we have gained from the sale of disposals gears and it is hoped that considerably more will be available in the forthcoming year. Frank stated that the disposal of gear by ballot was by far the fairest method.

Unfortunately, the President was not able to give a bright picture of VK4s participation in the various contests. A very poor number of logs were received and a general lack of interest was exhibited. Steps were being taken in an effort to rejuvenate enthusiasm and make Amateurs generally contest-conscious.

In closing his address, Frank appealed to Hams to be always ready to help the other fellow, always courteous on the air, and to always abide by the Regulations.

Afterwards the boys settled themselves in easy chairs to enjoy the film show provided by Harold 4HR. Perhaps last but not least, our thanks for a pleasant evening, Harold.

TOWNSVILLE

Details of the emergency work carried out by the boys up this way appear elsewhere in this issue.

As the secretary of the local club has been put on night work, he has been slewed just what day it is. Result, went off to the pictures with the XYL and the boys were left twiddling their thumbs. The president, 4RW prevailed upon Joe 4JH to give his lecture and he obliged. The subject was "Cyclatrons," which occupied over the hour. The boys' questions were successfully answered.

Ted 4EJ is now in Sydney for his eye examination and not a very favourable report given. Pat 5LT heard giving invitation to Ted to visit Adelaide for further report. Rex 4LR in great excitement working JA on 50 Mc. Claude 4UX on leave and now trapped in Charters Towns between flood waters. Ed. 4WH promised when he has scrounged sufficient miniature gear that he will make an appearance on the air. Len 4GD and Eric 4EL still maintaining close watch on 10 mx and pouncing upon the first station to appear. Pat 4ZBO also in Sydney for operation; hope all goes well Pat.

Bill O'Donnell has loan of converter and hopes to make the grade on 144 Mc. while building rig for 50 Mc. John 4DD still on leave, while Allan 4BE busy doing chores around the yard; only heard occasionally. Andy 4BW bemoaning the floods as XYL unable to get back from holidays; tin opener is almost worn out. Harry 4ZP giving resume of flood again in the Mackay area. Don 4PW had his first experience of emergency network and now has firm grip of all essentials, including XYL. Mary had her kitchen cluttered up all the time with Ham gear. "Well done Don."

John 4DK as usual to the fore in obtaining reports of flood waters. This cyclone caused rivers to rise and gave Ayr and Home their highest flood readings to date. Thanks John. Vern 4LK trying to out-do Bob 4NG on 50 Mc. Hal 4DO, since retiring to the leisured way of living, knocking over all the choice DX ably followed by 4DL in snatching the DX from 4RW. Give me a break sometime and blow a fuse! Believe Jim 4PR has been to the movies and saw "A Bundle of Joy," while Ray VR3A going to do likewise. A QSP from Mac VP2DC has made out back log of cards from 1956 until present time and sending to various Bureaux so a new country is promised for many who have waited a long time. Bob's (4TK) notes not yet to hand.

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SOUTH AUSTRALIA

Al Smythe (5MF) was the guest speaker at our March meeting where he delivered a most interesting and informative talk on the theory and practical application of transistors. It is felt that no one left the meeting without having benefitted from the details and advice provided by Al, because he covered the subject fully with diagram and example. The questions of protective circuits, needed heat dissipation methods, mechanical protection, etc., were all fully covered and finally some actual working examples of equipment using transistors for both r.f. and a.f. were displayed.

Our speaker's method of lecture was appreciated by all, his ready wit and obvious knowledge of what we might query during question time had the boys in good mood and it is felt that most will want to try these things out now. Even as Al said, whether they be yours or the boss'!

Brian 5CA, our new President, chaired his first meeting in that august capacity, we welcome him to a term of office and consider his method of calling a meeting to order satisfactory even if novel. (It's quite apparent he is not a phone man.)

Last month we reported the personnel of the new Council, since then the first meeting of that new body has been held and the various officers were appointed and offices filled. They are as follows: President—Brian Austin, 5CA. Senior Vice-Pres.—Lloyd Brice, 5OK; Junior Vice-Pres.—Comps. Daw, 5EF. Secretary—John Haseldine, 5JC; Treasurer—Jim Vivian, 5FO (Assistant—E. Barbier, 5MD). Minute Secretary—Lloyd Brice, 5OK. W.I.C.E.N.—John Bulling, 5KX, Chairman; John Haseldine, 5JC, Co-ordinator; Brian Austin, 5CA; Doc Barbier, 5MD; Rex Richards, 5DO. T.v.i. Committee—Bob Roper, 5PU, Chairman. Publicity—Warwick Parsons, 5PS. Div. Sub. Ed.—Comps. Daw, 5EF. Fed. Councillor—Rex Richards, 5DO. Contest Committee—Gordon Bowen, 5XU, Chairman; Reg Harris, 5RR, Secretary; Rex Richards, 5DO, Manager; Reg Galle, 5QR; Les Catford, 5LC. Programmes—Bob Roper, 5PU, Chairman; Lloyd Brice, 5OK; Jack Watts, 5OM; Norm Coltman. Membership—Les Duncan, 5AX. Technical Officer and Instruments—Doc Barbier, 5MD. Communications—Joe Kilygariff, 5JT. QSL Officer—Geo. Luxon, 5RX. Disposals Com.—Doc Barbier, 5MD; Jim Vivian, 5FO; Brian Austin, 5CA.

So there you have it, fellows, you know who to seek out for the various functions, and who to growl at if that should be necessary.

It is regretted that Jim 5JK had to resign as Chairman of W.I.C.E.N., due to health. Jim has done a mighty job for that and is the one responsible for its establishment in VK. We shall miss you from it my friend, and sincerely trust that your activities will not be interrupted for too long.

A minute of appreciation of Jim's work was recorded at the meeting on the motion of Luke 5LL.

Anyone missed out on their subs.? If you have, a quick smart letter, with the doings, to Secretary John, or Treasurer Jim will restore you to life. Unfinancial members do not get this magazine for a start, and in any case lose all other privileges.

The Secretary's home address, by the way, is: John Haseldine, 1 Ormonde Avenue, Cheltenham. Telephone: M 7851. P.O. Box 1234K, G.P.O.

The 5WI weekly broadcasts from Gordon 5XU's QTH have been upset lately (not the transmission, but the listening side of) by a very heavy QRM from the power supply lines. He has emphasised this to no extent. Last information is that a transformer blew up on a nearby pole recently and the noise went with it. Let's hope that was the trouble. In any case, a lot of areas are complaining in the same way, so let's hope some rain will either clean off the offending insulators or cause them to crack up (bad luck John, but you know how it is).

John 5KX has returned from his holiday to VK2 and advises good contacts with the 122 whilst at various spots en route and also whilst mobile.

Stewart 5MS has quite an extensive rebuilding programme in hand with both his receiving and transmitting equipment, aims to be completed and tested before next R.D. Contest. He has passed 236 countries worked, the last being PY0.

Bram 5AB has been busy during the summer months with bush fire radio nets but finds time to work some DX, his latest being HV1CN. Bram is thinking seriously along the lines of re-building using s.s.b. and has made a start along these lines. Jack 5WT/M continues to work that very interesting piece of gear, his transistorised audio portable rig, on a recent contact here from Murray Bridge he came in 5 x 9 plus with 6w. input. His modulator is OC71, OC72, 1852.

Ron 5FY from 5WC has just completed his new rig, which this time is plate and screen modulated. Sounds good, too—he had to be told what a mod. trans. was, but he got around to it eventually, now he has to short the thing out to go on c.w. Burnie of 5WC had a hand in this we presume, in any case fellows it sounds OK here and from all accounts must be quite a rig.

David 5AW, from Penola, is a recent addition to these bands, although not unfamiliar on v.h.f., but comes up on Sundays with reports to 5WI. Welcome to the d.c. bands David. Fred 5MA added his little bit to 7 megs. recently, bob up more often Fred, for even if Gordon can't hear you, we can, hi!

Lloyd 5OK, that senorous voiced Minute Secretary and Vice-President type, also decided to slum it on 7, thus forsaking 21, recently. It is understood his antenna has been raised from the fence post level with plastic pill tube insulators, to the astronomical height of about 20 feet with a consequent drop in signal level all round and increase in hash. Bury the thing, Lloyd, and get back to the 60 over 9 class.

After one of the slow morse sessions recently your scribe went back to Doc 5MD on 80 mx phone, just to let him know he was getting out, using about 70w. input and about 1 per cent. modulation. Yes, sir, he heard it all right, but what was the comment by 5JO who queried Doc that an unmodulated carrier just left the frequency. Check your demodulator, Joe.

Graham 5XV and Colin 5XY were both heard recently checking modulators, etc. I was stupid enough to join in for a while—you try saying those two calls in full some time and you will see what I mean.

Ken 5KC went mobile recently en route to the Burra. We followed him for a while, but he got mixed up or lost in the mulga somewhere, so we went back to the peaceful pursuit of mowing lawns.

Les 5AX is still in serious trouble with line noises and in order not to miss out on the Sunday scramble, goes mobile in the hills back of Gawler. By doing so he is finding the best listening position, so don't be surprised if you see him some time buying a broad brimmed hat and all that goes with it. He already has one site selected, so the next move must be some sheep or something.

A newcomer to VK5 and on the air now is Tubby 5NO who is at our newest QTH, Elizabeth. Welcome to VK5 and the bands. Son Geoff junior ops. for him, or with him, and can be heard most Sundays, a.m., his list of previous calls were 2ANN, 3MK, 2ALU, 2AER and maybe a few others, so if any of you have previously worked those calls, Tubby is your man.

Tom 5TL, now lives amongst us, temporarily in the city, but soon we believe to go to the bush again, although not so far this time. A 122 keeps him on the bands for the present, that is when the battery permits. F.b. Tom, hope your new QTH will be to your liking.

Bruce 5OR, who is morse instructor for the A.O.C.P. classes and who has always been a c.w. man has at last been talked into going on phone. It took Max 5OS 18 months to get Bruce to do it. You did not do the Ham fraternity any service Max, for it will take at least 18 years to get him off again. Of course you know Bruce bent his arm in an argument between a car and motor bike; this had the effect of causing him to use his left foot on the key so may have influenced the decision to go phone. Crystal control, clamp tube mod. to 807 with 25w. input comprises his scotch rig with the rx a 3-tube dual wave job. A mighty, mammoth, super de-luxe 23-tube quadruple conversion rx coming up but not quite finished yet.

Do you want to be flash and display the Institute badge on your car? Federal Secretary has a supply at 30/- each—it's good publicity in any case and should create interest and help spread news of us.

Bob 5RI continues to hear all the signals we don't down here. Half your luck on noise level, Bob. Pat 5KM bobs up each Sunday, he has gone all t.v. and has a fine antenna set-up for it—rotating and all. Getting some results, too, and is studying propagation of those frequencies.

Joe 5JO advises a visit to this No. 1 State of Jim 3LM and XYL Elva; they dropped in here for a few minutes on the way through. It was a surprise visit and caused a gathering of the clan at Frank 5MZ's QTH where Carl 5SS, Max 5OS, Joe 5JO with YLs and XYLs saw films, ate supper, talked, laughed, and generally enjoyed themselves. But what is this we hear about Jim distributing 1957 calendars? We may be half hour behind VK3, but not 12 months surely.

Doc 5MD has been on a rampage at VK6 land, and from reports from there it seems he got himself lost trying to make appointments, joined forces with Len 6LG and thus formed a committee of two and decided to entertain VK6 at VK5 expense. Our Treasurer Jim 5FO will not be pleased at the cost of, in spite of the two cases of champagne not used and returned on credit. It is thought that refraining from chartering a plane to bring 6DX down, showed reasonable austerity and is to be commended for future guidance.

Doc and Len have worked out a dollar a pick-a-back QSL stunt to finance future entertainings—details from them direct please.

Yes, it's happened again. Warwick 5PS has been on the air portable at Oakbank and made the annual Easter contact with yours truly. The one and only for the year. (Someone please offer to pay his light bill, we may hear him more often.—Ed.) He complains that the tree to which the sky wire is attached grows 5 ft. per year and is now 90 ft. high. He claims to have climbed it to affix said wire—nothing but the top for Pansie—and as he reduces (height, not girth!) 1 inch per year, it must have been worth watching this climb. Must put it in the diary for a sight-see next year. He has had the hide to claim a W contact from there on 40 mx c.w. Shame on you, he must have used a switch to open the filament circuits to break the carrier into c.w.

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WESTERN AUSTRALIA

The Divisional meeting was held on 18th March. Mr. Ray Peterson lectured on "Radio Communication in Country Areas."

The weekly broadcast is being continued on 40 and 5 mx, the latter being relayed by 6BO on 80 mx. Both 80 and 40 mx are required at present to give reasonable coverage for country members.

The 50 Mc. band has been giving interesting results, 6BE having worked 17 JAs during mid March. 6BO also worked JA2, 3 and 4, and 6ZBG and 6ZBU also took advantage of the favourable conditions. Good work chaps!

Tom 6TH was heard on 15th to say he was about to be married. Congrats and best of luck Tom. 6MA and 6GW are active on the l.f. bands from Merredin and Albany respectively, and 6WL has returned after being QRT for ten months. Believe he has a YL jr. op. aged seven months who already takes an interest in the shack! 6LM somehow found time in the middle of house-building to erect a new tower. 6FL also has a tower.

6CL besides going mobile on 40 mx has been playing with a 13 el. long yagi on 2 mx. 6DW will be missed from Bruce Rock on the v.h.f. bands when he moves to Perth in the near future. Congrats to 6ZAM who has taken up a scholarship in Canada. Also 6ZAK and 6ZAT who have gone to Melbourne University. 6ZAE has gone to Cocos Island.

We hope George VS1GM enjoyed his visit to W.A. He was heard visiting VK6BE. Another expected visitor was Doc. VK5MD, but at time of writing I have not seen him. Doc often puts through a good signal on 80 mx and his voice is well known in the West. We wish 6MK a quick recovery to health, after his recent spell in hospital.

The new Advisory Committee has been formed with members 6BE, 6JA, 6RU, 6SJ, 6VM and 6ZZ; Chairman, Alan Read.

At time of writing, nominations for the new Council should be in. We understand three of the retiring Council members are not seeking re-election, on account of medical grounds. We are sorry that this should be the case, many of the members have given their services to the Divisional Council for a long time, but we hope that some of our new members will come forward to take their places. It is an opportunity to help the Institute; and to serve your fellow members in this way, is an interesting side of Amateur Radio and an experience well worth while.

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TASMANIA

The Annual General Meeting and Dinner was held in March at the Hobart clubrooms. Thanks to excellent catering arrangements in the hands of Tommy Moore, it can be reported that the "final bottles" gave undistorted output until well after midnight. They tell me there was business done, too.

Geoff Aschman (7GA) has departed for Europe and G-land, with our good wishes and our thanks for good year's work as President. For a continuation of sound guidance and commonsense of the sort that Geoff provided, there need be no doubts about his successor, either. This is none other than Peter Dunne (7PD), a comparatively new licensee. But it's one of the licences he used to issue under the Regulations he helped to frame.

The Division's membership continues to show a slight overall increase and there have been some outstandingly good lectures and well-attended meetings. A full call of those who have helped in one way and another over the past year—and, remember, you help in simply having an active station—would make a long list.

The W.I.C.E.N. exercises, with 7OM in control, are run regularly on Sunday evenings at 2030, and some half dozen stations are now available as portable or mobile for reliable contact across the State. Gear is various, chiefly Type 3 Mk. II., Type A Mk. III., and 122. A number of 128 sets have been acquired, and these should provide quite a boost for portable work when the boys have run down all the bugs that came with them. Despite its limited power, this little job goes surprisingly well as a mobile with vibrator h.t., for at least cross-town working. "Stationary mobile", of course, unless you can arrange for will-power steering or rudder pedals!

NORTH WESTERN ZONE

Our monthly meeting held at Ulverstone was again well attended by both full members and associates. Unfortunately, I arrived late, entered the wrong room, very nearly got mixed up in an argument on the advantages and disadvantages of white leather footballs or something, before being directed to the next room.

On entering the correct room the first person I spotted was Tom 7AL, a visitor from the far south. Pleased to see you Tom, and thanks for the words of wisdom, etc. Call again sometime.

Four of our N.W. members attended the Annual Dinner in Hobart during March and assisted in the testing of an 813 to distinction.

After the meeting and following supper, the usual auction was conducted by our visitor, Tom 7AL. Some interesting items went under the hammer, some brought along by Ted 7EJ. Appears Ted is cleaning out prior to a move. Anything definite, Ted? Our associates were well to the fore in the biddings, our Hon. Sec. even expressed surprise at the amount of junk he had bought for so much money. Allan Baptist beat Max for a power tranny which Max had hopes of trying the winding machine on. Roy 7RN acquired two 866 mercury vapours and an 807, Jap. made.

As I have been looking after the cash, our Treasurer having gone early, and after I'd paid everybody the zone's commission finished up at £12. Eh! Sorry, £1/2/0!. I trust you had a pleasant break at Easter.

HAMADS

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Advertisements under this heading will only be accepted from Institute Members who desire to dispose of equipment which is their own personal property. Copy must be received by 8th of the month, and remittance must accompany advertisement. Calculation of cost is based on an average of six words a line. Dealers' advertisements not accepted in this column.

FOR SALE: Command Rx (Q5er 190 to 550 Kc.), 12v. fils., gain control, b.f.o. switch, phone jack. Offers to M. E. Dixon, 16 Jingella Ave., Jordanville, S.E.11, Vic.

FOR SALE: QQE06/40 and socket, £10. Autoplex automatic key, £7/10/-. Both new. J. Oliver, 18 Percy Street, Devonport, Tas.

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Sell: Mullard 5-10 Hi-Fi Amplifier (ultra linear version), professionally wired and assembled, hardly used, £19/10/-. Complementary R. & H. Tuner (6AE8 and 6N8), £4/10/-. RF26 Converter, 50-65 Mc., unused, £7/10/-. Disposals 20-watt Modulation Transformer, £1/10/-. R. Jones, 25 Panoramic Rd., Nth. Balwyn, Vic.

WANTED: AR7 Coil Boxes. Price and condition to J. Long, George St., Bunyip, Vic.

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WANTED to buy or borrow: Instruction Book and/or circuit for BC348J or BC348 series. D. V. Scott, Johnson St., Maffra, Vic.

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0.05/400v. 1/4 ea.
0.05/600v. 1/7 ea.
0.1/200v. 1/2 ea.
0.1/400v. 1/9 ea.
0.1/600v. 2/- ea.
0.25/200v. 2/- ea.
0.25/400v. 2/5 ea.
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1	x 12	x 3	..	31/4
2	x 4	x 3	..	24/10
2	x 5	x 1	..	11/7
2	x 5	x 2	..	17/10
2	x 5	x 3	..	24/10
3	x 3	x 1	..	11/7
3	x 3	x 2	..	17/10
3	x 3	x 3	..	24/10
4	x 2	x 1	..	11/7
4	x 2	x 2	..	17/10
4	x 2	x 3	..	24/10
6	x 2	x 1	..	13/10
6	x 2	x 2	..	23/10
6	x 2	x 3	..	31/4

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13	x 7	x 2½	..	21/9
11	x 8	x 2½	..	17/6
13	x 10	x 2½	..	21/9
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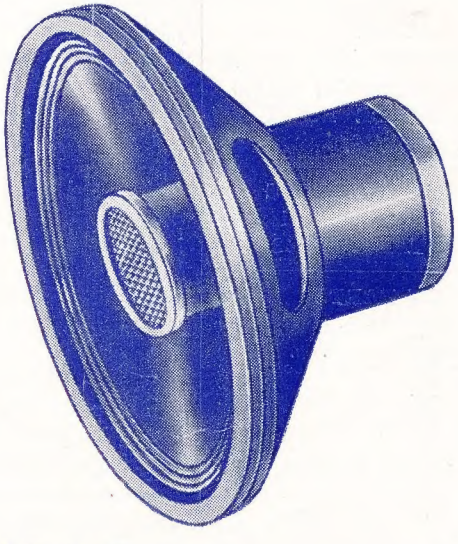

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